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OM nucleic - nucleic search, using sw model

Run on: November 24, 2005, 04:56:55 ; Search time 232 Seconds
(without alignments)
2542.350 Million cell updates/sec

Title: US-10-066-007A-3

Perfect score: 3969
Sequence: 1 cggaccgaagctcgccagc.....ttcatgtttgtcgactgcag 3969

Scoring table: IDENTITY_NUC

Gapop 10.0 , Gapext 1.0

Searched: 3205263 seqs, 74304013 residues

Total number of hits satisfying chosen parameters: 6410526

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%

Maximum Match 100%

Listing first 45 summaries

Database : Published Applications NA New:*

- 1: /cgn2_6/ptodata/1/pubpna/US10_NEW_PUB.seq.*
- 2: /cgn2_6/ptodata/1/pubpna/US06_NEW_PUB.seq.*
- 3: /cgn2_6/ptodata/1/pubpna/US07_NEW_PUB.seq.*
- 4: /cgn2_6/ptodata/1/pubpna/US08_NEW_PUB.seq.*
- 5: /cgn2_6/ptodata/1/pubpna/US09_NEW_PUB.seq.*
- 6: /cgn2_6/ptodata/1/pubpna/PCT_NEW_PUB.seq.*
- 7: /cgn2_6/ptodata/1/pubpna/US11_NEW_PUB.seq.*
- 8: /cgn2_6/ptodata/1/pubpna/US11_NEW_PUB.seq2.*
- 9: /cgn2_6/ptodata/1/pubpna/US11_NEW_PUB.seq3.*
- 10: /cgn2_6/ptodata/1/pubpna/US60_NEW_PUB.seq.*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	DB ID	Description
1	39	1.0	38703	7	US-11-052-544-28
2	33	0.8	3268	1	US-10-793-626-3394
3	32.2	0.8	1748	1	US-10-689-742-67
4	32.2	0.8	2175	1	US-10-821-234-654
5	32.2	0.8	7240	1	US-10-496-711-25
6	31.6	0.8	13672	7	US-11-055-035-2
7	31.4	0.8	23459	1	US-10-962-756A-1
8	31.2	0.8	2956	1	US-10-689-742-103
9	31	0.8	340000	7	US-11-102-978-3
10	30.4	0.8	2031	7	US-11-135-855-5
11	30.4	0.8	2154	7	US-11-135-855-6
12	30.4	0.8	2596	8	US-11-112-944-1
13	30.4	0.8	7980	1	US-10-509-921-4
14	30.4	0.8	7980	1	US-10-509-921-5
15	30.4	0.8	7983	1	US-10-509-921-7
16	30.4	0.8	340000	7	US-11-102-978-3
17	30.2	0.8	609	1	US-10-793-626-3263
18	30.2	0.8	3246	1	US-10-793-626-3459
19	30	0.8	888	1	US-10-821-234-739
20	30	0.8	3221	1	US-10-793-626-4163
21	30	0.8	3423	1	US-10-793-626-3355
22	30	0.8	4557	9	US-11-060-920-3
23	29.8	0.8	930	1	US-10-793-626-355

24	29.8	0.8	1198	1	US-10-667-295-58	Sequence 58, Appl
25	29.8	0.8	3592	1	US-10-793-626-4172	Sequence 4172, Ap
26	29.8	0.8	3649	1	US-10-793-626-3340	Sequence 3340, Ap
27	29.8	0.8	14342	1	US-10-821-234-303	Sequence 303, App
28	29.8	0.8	19959	1	US-10-993-516-1	Sequence 1, Appl
29	29.6	0.7	1260	7	US-11-074-176-47	Sequence 47, Appl
30	29.6	0.7	1343	9	US-11-082-389-105	Sequence 105, App
31	29.6	0.7	1830	9	US-11-082-389-103	Sequence 103, App
32	29.6	0.7	2166	1	US-10-467-962B-48	Sequence 48, Appl
33	29.4	0.7	2379	1	US-10-131-826A-535	Sequence 535, App
34	29.2	0.7	861	1	US-10-793-626-2191	Sequence 2191, Ap
35	29.2	0.7	2748	1	US-10-526-731-4	Sequence 4, Appl
36	29.2	0.7	3446	1	US-10-793-626-4298	Sequence 4298, Ap
37	29	0.7	1425	1	US-10-689-742-97	Sequence 97, Appl
38	29	0.7	1650	1	US-10-821-234-76	Sequence 76, Appl
39	29	0.7	2025	1	US-10-501-039-9	Sequence 9, Appl
40	29	0.7	2304	8	US-11-112-944-10	Sequence 10, Appl
41	29	0.7	3015	1	US-10-793-626-4418	Sequence 4418, Ap
42	29	0.7	3110	1	US-10-793-626-4423	Sequence 4423, Ap
43	29	0.7	3259	1	US-10-793-626-3399	Sequence 3399, Ap
44	29	0.7	3436	1	US-10-793-626-3556	Sequence 3556, Ap
45	28.8	0.7	321	1	US-10-821-234-512	Sequence 512, App

ALIGNMENTS

RESULT 1

US-11-052-544-28
; Sequence 28, Application US/11052544
; Publication No. US20050255504A1
; GENERAL INFORMATION:
; APPLICANT: PARL, Fritz F.
; TITLE OF INVENTION: METHOD OF DETECTING AN INCREASED
; FILE REFERENCE: 22000.012702
; CURRENT APPLICATION NUMBER: US/11/052.544
; CURRENT FILING DATE: 2005-02-07
; PRIOR APPLICATION NUMBER: 60/543,866
; PRIOR FILING DATE: 2004-02-12
; NUMBER OF SEQ ID NOS: 29
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 28
; LENGTH: 38703
; TYPE: DNA
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence; note =
; OTHER INFORMATION: synthetic construct
US-11-052-544-28

Query Match	1.0%;	Score 39;	DB 7;	Length 38703;
Best Local Similarity	50.8%;	Pred. No. 0.6;		
Matches	93;	Conservative	0;	Mismatches 90; Indels 0; Gaps 0;
Qy	406	CCATGCTTTTTCGATCGTTTTTACATACCTACCGTCGATTCCTAACCTTTCTTCTCTCT 465		
Db	34350	CCTTCTTTCTTTCTTTCTTTCTTTCTTTCTTTCTTTCTTTCTTTCTTTCTTTCTTTCTTTCTTT 34409		
Qy	466	TCTCTTGCATTTTGCATTTCTATCTCGTGAACATCGATCCGATTTTGCACCTTAC 525		
Db	34410	TTTCTTTCTTTCTTTCTTTCTTTCTTTCTTTCTTTCTTTCTTTCTTTCTTTCTTTCTTTCTTT 34469		
Qy	526	TTTCTCCATATGTTTCATCTTGGCTTGTCTACAGGTGCTTTAGGCTTGGCTTCTTCTCA 585		
Db	34470	CTTTTCTTTCTTTCTTTCTTTCTTTCTTTCTTTCTTTCTTTCTTTCTTTCTTTCTTTCTTT 34529		
Qy	586	TGG 588		
Db	34530	TGG 34532		
RESULT 2				

```
US-10-793-626-3394
; Sequence 3394, Application US/10793626
; Publication No. US20050255478A1
; GENERAL INFORMATION:
; APPLICANT: KIMMERLY, WILLIAM JOHN
; TITLE OF INVENTION: STAPHYLOCOCCUS EPIDERMIDIS NUCLEIC ACIDS AND PROTEINS
; FILE REFERENCE: PU3480US
; CURRENT APPLICATION NUMBER: US/10/793,626
; PRIOR FILING DATE: 2004-03-04
; PRIOR APPLICATION NUMBER: 60/164,258
; PRIOR FILING DATE: 1999-11-09
; NUMBER OF SEQ ID NOS: 4472
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 3394
; LENGTH: 3268
; TYPE: DNA
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: synthetic
; OTHER INFORMATION: nucleic acid sequence
US-10-793-626-3394

Query Match          0.8%; Score 33; DB 1; Length 3268;
Best Local Similarity 53.3%; Pred. No. 7.8;
Matches 69; Conservative 0; Mismatches 60; Indels 0; Gaps 0;

QY 2563 AAATTACTTCTTCTGCAATGACTAAACGGCTTCCATTTCTTGATCCATTTTAGAGAC 2622
    ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||
DB 2892 AAAACACTTCTATTATTATTAATACAAATGATTACCAATTAACTTCAATATAAGTT 2951
    ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||

QY 2623 GAACCTTAATCGGTGCTTATCTCGAAGCGGTGGTTCTCGATCTTGGTCTTCTCTCC 2682
    ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||
DB 2952 GAACGCTTTAAGGAGGATAATTTCTTCTTAAAGCGTTCTTCAGTATTCGTTTTAAATTC 3011
    ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||

QY 2683 AAATACAAAT 2691
    ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||
DB 3012 AACTAGNAT 3020
    ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||

RESULT 3
US-10-689-742-67
; Sequence 67, Application US/10689742
; Publication No. US20050250180A1
; GENERAL INFORMATION:
; APPLICANT: Jacobs, Kenneth
; APPLICANT: McCoy, John M
; APPLICANT: LaVallie, Edward R
; APPLICANT: Racie, Lisa A
; APPLICANT: Evans, Cheryl
; APPLICANT: Merberg, David
; APPLICANT: Treacy, Maurice
; APPLICANT: Spaulding, Vikki
; TITLE OF INVENTION: SECRETED PROTEINS AND POLYNUCLEOTIDES ENCODING THEM
; FILE REFERENCE: 00766.000091.10
; CURRENT APPLICATION NUMBER: US/10/689,742
; CURRENT FILING DATE: 2003-10-22
; PRIOR APPLICATION NUMBER: 09/745,793
; PRIOR FILING DATE: 2000-12-21
; NUMBER OF SEQ ID NOS: 231
; SOFTWARE: PatentIn version 3.2
; SEQ ID NO 67
; LENGTH: 1748
; TYPE: DNA
; ORGANISM: Homo sapiens
US-10-689-742-67

Query Match          0.8%; Score 32.2; DB 1; Length 1748;
Best Local Similarity 46.9%; Pred. No. 8.8;
Matches 100; Conservative 0; Mismatches 113; Indels 0; Gaps 0;

QY 2393 AAGCACTAATAGAGTCTTTATGTTCTCTGTTTATGATCAGACTTCTTCGACAGCTTCGAC 2452
    ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||
DB 945 AAGAGCTACTCGATCAGTTGAGTCTGCTGAGTGGGATGTCGTGAGTGGAGTGATGATC 1004
    ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||
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QY 2453 ATGGATGTTTCACCGACTCTTCAGAGAGCAAAAGCCGTCAGGATTAAGTTCGAGAGAAAT 2512
    ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||
DB 1005 AAGCTGTATTACCTTTTGTATGACAGGATCAACTCACCATCACCTTTTGAAGAGTCAG 1064
    ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||

QY 2513 TTGTCAGATCGACACGGATATGCCTTACGCTGTGAGGATGTTTTTGATGCTAAATTAATTC 2572
    ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||
DB 1065 TTGTTGGTTTCCCTTCTCGACAAAGCGTTATAGGAAGATTGTTGATGTCAATTTTCAAT 1124
    ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||

QY 2573 TTCTTGCAATGACTTAAACCGCTTCCATTTCT 2605
    ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||
DB 1125 CTCCTGTAGATGAGGATCAAGCTCCTCTCTCT 1157
    ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||

RESULT 4
US-10-821-234-654
; Sequence 654, Application US/10821234
; Publication No. US20050255114A1
; GENERAL INFORMATION:
; APPLICANT: Labat, Ivan
; APPLICANT: Stache-Crain, Birgit
; APPLICANT: Andarmani, Susan
; APPLICANT: Tang, Y. Tom
; TITLE OF INVENTION: Methods for Diagnosis and Treatment of Preeclampsia
; FILE REFERENCE: 821A
; CURRENT APPLICATION NUMBER: US/10/821,234
; CURRENT FILING DATE: 2004-04-07
; PRIOR APPLICATION NUMBER: US 60/462,047
; PRIOR FILING DATE: 2003-04-07
; NUMBER OF SEQ ID NOS: 1704
; SOFTWARE: pt_seq_genes Version 1.0
; SEQ ID NO 654
; LENGTH: 2175
; TYPE: DNA
; ORGANISM: Homo sapiens
US-10-821-234-654

Query Match          0.8%; Score 32.2; DB 1; Length 2175;
Best Local Similarity 51.0%; Pred. No. 10;
Matches 76; Conservative 0; Mismatches 73; Indels 0; Gaps 0;

QY 1374 CCAATTTTCTTAGAAAAAGGTATGGAACCTTTCGACAGATGATGAGGATCGGGCTGAG 1433
    ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||
DB 634 CCCATCACCTTTTATTGGAAGAGAACGAGAGAAAGAAATTTAGTGATGATGAGGCAGAG 693
    ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||

QY 1434 AAGGATATGCGCTGGGAGAGTCCGCCGTGAAAAGAGGCAACCACTCCGAGACCGAA 1493
    ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||
DB 694 GAAGAGAAAGGTGAGAAAGAGAGGAGAGATAAAGATGATGAAGAAAGCCCAAGATCGAA 753
    ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||

QY 1494 GGAGTCGATGTAAAGGATTGGGTGCTGAG 1522
    ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||
DB 754 GATGTCGGTTCAGATGAGGAGGATGACAG 782
    ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||

RESULT 5
US-10-496-711-25/c
; Sequence 25, Application US/10496711
; Publication No. US20050256649A1
; GENERAL INFORMATION:
; APPLICANT: SmithKline Beecham Corporation
; TITLE OF INVENTION: HIGH THROUGHPUT CORRELATION OF
; TITLE OF INVENTION: POLYMORPHIC FORMS WITH MULTIPLE PHENOTYPES WITHIN CLINICAL
; TITLE OF INVENTION: POPULATIONS
; FILE REFERENCE: PU4699WO
; CURRENT APPLICATION NUMBER: US/10/496,711
; CURRENT FILING DATE: 2004-05-26
; PRIOR APPLICATION NUMBER: 60/344892
; PRIOR FILING DATE: 2002-12-21
; NUMBER OF SEQ ID NOS: 25
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 25
; LENGTH: 7240
; TYPE: DNA
```


Db 4039 TCTATCTCGCTTTCTGTAGTCTCTCTGCTCTTATCTGTCTGCTCCCTCCCTTATCTGTC 4098
QY 3868 TGTATATTGTCATACGACGTCGTGTGCGTCAATCTCAATATTCAGCCTCTTTCATGCTT 3927
Db 4099 TTCTTCTTTGCGCTGTCACTATCTCTGACCTCTTCTGCTGCTAGTTCTCTTTTCAGTGTCT 4158
QY 3928 CTGTGCTCCATAGATGATCTTC 3952
Db 4159 CTGTTTCACTCTCTCTTTGTTTC 4183

RESULT 8
US-10-689-742-103
; Sequence 103, Application US/10689742
; Publication No. US20050250180A1
; GENERAL INFORMATION:
; APPLICANT: Jacobs, Kenneth
; APPLICANT: McCoy, John M
; APPLICANT: Lavalie, Edward R
; APPLICANT: Racie, Lisa A
; APPLICANT: Evans, Cheryl
; APPLICANT: Merberg, David
; APPLICANT: Treacy, Maurice
; APPLICANT: Spaulding, Vikki
; TITLE OF INVENTION: SECRETED PROTEINS AND POLYNUCLEOTIDES ENCODING THEM
; FILE REFERENCE: 00746.000091.10
; CURRENT APPLICATION NUMBER: US/10/689,742
; CURRENT FILING DATE: 2003-10-22
; PRIOR APPLICATION NUMBER: 09/746,783
; PRIOR FILING DATE: 2000-12-21
; NUMBER OF SEQ ID NOS: 231
; SOFTWARE: PatentIn version 3.2
; SEQ ID NO 103
; LENGTH: 2956
; TYPE: DNA
; ORGANISM: Homo sapiens
US-10-689-742-103

Query Match 0.8%; Score 31.2; DB 1; Length 2956;
Best Local Similarity 58.7%; Pred. No. 27;
Matches 54; Conservative 0; Mismatches 38; Indels 0; Gaps 0;
QY 2684 AATACAATACGGATTATGCTCATCTGATTGGTCTACGGGCTGTGGAAATTTAACTAGT 2743
Db 1207 AATGATTTTATGTTATTTTCTAATGATACCACTACCTTCGGGGCTAACTAAACATT 1266
QY 2744 TTGTTAAGGAGTCTCTTCGCTAGACCCCTCT 2775
Db 1267 TTGTGCAGCATCTCTTAGTTTACATCTCTCT 1298

RESULT 9
US-11-102-978-3/c
; Sequence 3, Application US/11102978
; Publication No. US20050250142A1
; GENERAL INFORMATION:
; APPLICANT: University of Utah Technology Transfer Office
; APPLICANT: University of Utah Research Foundation
; TITLE OF INVENTION: Diagnosis and Treatment of Herpes Simplex Virus Disease
; FILE REFERENCE: 0274-5537.1US
; CURRENT APPLICATION NUMBER: US/11/102,978
; CURRENT FILING DATE: 2005-04-11
; PRIOR APPLICATION NUMBER: PCT/US2003/033152
; PRIOR FILING DATE: 2003-10-18
; PRIOR APPLICATION NUMBER: 60/419,576
; PRIOR FILING DATE: 2002-10-18
; NUMBER OF SEQ ID NOS: 13
; SOFTWARE: PatentIn version 3.2
; SEQ ID NO 3
; LENGTH: 340000
; TYPE: DNA
; ORGANISM: Homo sapiens
; FEATURE:

; NAME/KEY: exon
; LOCATION: (56948)..(57115)
; OTHER INFORMATION: C2lorf34 exon
; FEATURE:
; NAME/KEY: misc feature
; LOCATION: (8006)..(81089)
; OTHER INFORMATION: Gene VDACP2; voltage-dependent anion channel isoform 2 pseudogene
; FEATURE:
; NAME/KEY: exon
; LOCATION: (167308)..(167438)
; OTHER INFORMATION: C2lorf34 exon
; FEATURE:
; NAME/KEY: exon
; LOCATION: (216732)..(216833)
; OTHER INFORMATION: C2lorf34 exon
US-11-102-978-3

Query Match 0.8%; Score 31; DB 7; Length 340000;
Best Local Similarity 55.0%; Pred. No. 4.1e+02;
Matches 61; Conservative 0; Mismatches 50; Indels 0; Gaps 0;
QY 3832 GACTCTCTTTACCCCTATATATATTCATCCGCTGTATATTTGTCTATCAGCAGTC 3891
Db 81435 GGCTCATTTTGTCTCTCTATCTATCTATCTATCTATCTATCTATCTATCTATCTATC 81376
QY 3892 TGTGTCGTCACACTCAATATTCAGCCCTCTTCATGCTTCTGTGTCTCCATAGA 3942
Db 81375 TACCTACCTATCTTACTGCTATCTATCTTACTGATTCGTTTCTTAAGCAGA 81325

RESULT 10
US-11-135-855-5
; Sequence 5, Application US/11135855
; Publication No. US20050255557A1
; GENERAL INFORMATION:
; APPLICANT: SMITHKLINE BEECHAM CORPORATION
; APPLICANT: SMITHKLINE BEECHAM P.L.C.
; TITLE OF INVENTION: NOVEL COMPOUNDS
; FILE REFERENCE: GP50013
; CURRENT APPLICATION NUMBER: US/11/135,855
; CURRENT FILING DATE: 2005-05-24
; PRIOR APPLICATION NUMBER: US/10/203,708
; PRIOR FILING DATE: 2002-08-13
; PRIOR APPLICATION NUMBER: PCT/US01/04703
; PRIOR FILING DATE: 2001-02-14
; PRIOR APPLICATION NUMBER: 60/182,172
; PRIOR FILING DATE: 2000-02-14
; PRIOR APPLICATION NUMBER: 60/186,084
; PRIOR FILING DATE: 2000-02-29
; NUMBER OF SEQ ID NOS: 46
; SOFTWARE: FastSeq for Windows Version 3.0
; SEQ ID NO 5
; LENGTH: 2031
; TYPE: DNA
; ORGANISM: Homo sapiens
US-11-135-855-5

Query Match 0.8%; Score 30.4; DB 7; Length 2031;
Best Local Similarity 61.2%; Pred. No. 37;
Matches 49; Conservative 0; Mismatches 31; Indels 0; Gaps 0;
QY 1395 ATGGAACCTTGTGACCAAGATGATGGAGGATCGGCTGAGAAGGATATGCCCTGGGAGAG 1454
Db 1663 ATCGAGCGGTGCAGNAAGTGAACAGGCTGGATGAGAGGAGAGCCCGGAGAGAG 1722
QY 1455 TCGGCGGTGAAAAAGAGGC 1474
Db 1723 CTGGCGGGGAGGAGCTGGC 1742

RESULT 11
US-11-135-855-6
; Sequence 6, Application US/11135855

```
; Publication No. US2005025557A1
; GENERAL INFORMATION:
; APPLICANT: SMITHKLINE BEECHAM CORPORATION
; TITLE OF INVENTION: SMITHKLINE BEECHAM P.I.C.
; FILE REFERENCE: GP50013
; CURRENT APPLICATION NUMBER: US/11/135,855
; CURRENT FILING DATE: 2005-05-24
; PRIOR APPLICATION NUMBER: US/10/203,708
; PRIOR FILING DATE: 2002-08-13
; PRIOR APPLICATION NUMBER: PCT/US01/04703
; PRIOR FILING DATE: 2001-02-14
; PRIOR APPLICATION NUMBER: 60/182,172
; PRIOR FILING DATE: 2000-02-14
; PRIOR APPLICATION NUMBER: 60/186,084
; PRIOR FILING DATE: 2000-02-29
; NUMBER OF SEQ ID NOS: 46
; SOFTWARE: FastSeq for Windows Version 3.0
; SEQ ID NO 6
; LENGTH: 2154
; TYPE: DNA
; ORGANISM: Homo sapiens
; US-11-135-855-6

Query Match      0.8%; Score 30.4; DB 7; Length 2154;
Best Local Similarity 61.2%; Pred. No. 39;
Matches 49; Conservative 0; Mismatches 31; Indels 0; Gaps 0;

Qy 1395 ATGCAACTTGTGCAAGATGATGGAGTGGCGCTGAGAAGGATATGGCGTGGGAGAG 1454
Db 1786 ATCAGGCGGTGCAAGATGAAAGCTGGGATGAGAAGGAGCGGAGAGAG 1845

Qy 1455 TCGCCGGTGAAGAAGGC 1474
Db 1846 CTGGCGGGAGGAGCTGGC 1865

RESULT 12
US-11-112-944-1
; Sequence 1, Application US/11/112,944
; Publication No. US20050244872A1
; GENERAL INFORMATION:
; APPLICANT: Harris, Cole
; TITLE OF INVENTION: Breast Cancer Gene Expression Biomarkers
; FILE REFERENCE: 05-325-US
; CURRENT APPLICATION NUMBER: US/11/112,944
; CURRENT FILING DATE: 2005-04-22
; PRIOR APPLICATION NUMBER: US 60/564,757
; PRIOR FILING DATE: 2004-04-23
; NUMBER OF SEQ ID NOS: 29
; SOFTWARE: PatentIn version 3.3
; SEQ ID NO 1
; LENGTH: 2596
; TYPE: DNA
; ORGANISM: Homo sapiens
; US-11-112-944-1

Query Match      0.8%; Score 30.4; DB 8; Length 2596;
Best Local Similarity 53.3%; Pred. No. 45;
Matches 64; Conservative 0; Mismatches 56; Indels 0; Gaps 0;

Qy 2821 TGGCTTCATACGCAATATTTTCATATTCCTTTGTCATACGATACAGGCTGAC 2880
Db 602 TGCCTTCATCCCTCATTTCCCTCCCTCTCATTTCTTCTCCCTCCCTCCCTGAGC 661

Qy 2881 CGAGCTCAATTCGGCTTCCTCTCTGCTCTCTTTTCGGCTTTCTTATCTTCATT 2940
Db 662 CTCCTTTCCTCCCTCTGCTCTCTTCTTCTTCTTCTTCTTCTTCTTCTTCTTCTT 721

RESULT 13
US-10-509-921-4
; Sequence 4, Application US/10509921
; Publication No. US20050250093A1
; GENERAL INFORMATION:
; APPLICANT: SmithKline Beecham Corporation
; TITLE OF INVENTION: Hepatitis C Virus Sub-Genomic Replicons
; FILE REFERENCE: P51335
; CURRENT APPLICATION NUMBER: US/10/509,921
; CURRENT FILING DATE: 2004-10-01
; PRIOR APPLICATION NUMBER: 60/369,685
; PRIOR FILING DATE: 2002-04-03
; NUMBER OF SEQ ID NOS: 54
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 4
; LENGTH: 7980
; TYPE: DNA
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: The polynucleotide sequence encodes sequences from
; OTHER INFORMATION: HCV H77 (BB7-F3) Replicons
; US-10-509-921-4

Query Match      0.8%; Score 30.4; DB 1; Length 7980;
Best Local Similarity 53.3%; Pred. No. 1.1e+02;
Matches 64; Conservative 0; Mismatches 56; Indels 0; Gaps 0;

Qy 369 CCGAGGCCGAAACGAGACAGACACCATCATCATCATCATCATCATCATCATCATCAT 428
Db 7752 CCGATGAGGTTGGGTAAACACTCCGGCTCTTAAGCCATTCCTGTTTTTTTTTTT 7811

Qy 429 TTACATACACTACCGTCAATCTTAACCTTCTTCTTCTTCTTCTTCTTCTTCTTCTT 488
Db 7812 TTTTCTTCTTCTTCTTCTTCTTCTTCTTCTTCTTCTTCTTCTTCTTCTTCTTCTT 7871

RESULT 14
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; Sequence 5, Application US/10509921
; Publication No. US20050250093A1
; GENERAL INFORMATION:
; APPLICANT: SmithKline Beecham Corporation
; TITLE OF INVENTION: Hepatitis C Virus Sub-Genomic Replicons
; FILE REFERENCE: P51335
; CURRENT APPLICATION NUMBER: US/10/509,921
; CURRENT FILING DATE: 2004-10-01
; PRIOR APPLICATION NUMBER: 60/369,685
; PRIOR FILING DATE: 2002-04-03
; NUMBER OF SEQ ID NOS: 54
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 5
; LENGTH: 7980
; TYPE: DNA
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: The polynucleotide sequence encodes sequences from
; OTHER INFORMATION: HCV H77 (BB7-F3) Replicons
; US-10-509-921-5

Query Match      0.8%; Score 30.4; DB 1; Length 7980;
Best Local Similarity 53.3%; Pred. No. 1.1e+02;
Matches 64; Conservative 0; Mismatches 56; Indels 0; Gaps 0;

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RESULT 15
US-10-509-921-7
; Sequence 7, Application US/10509921
; Publication No. US20050250093A1
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OM nucleic - nucleic search, using sw model

Run on: November 24, 2005, 01:34:24 ; Search time 661 Seconds

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Title: US-10-066-007A-3

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Gapop 10.0 , Gapext 1.0

Searched: 1303057 seqs, 888780828 residues

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Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

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2	353.2	8.9	1932	US-09-518-386B-2	Sequence 2, Appli
3	82.8	2.1	7218	US-08-232-463-14	Sequence 14, Appl
C 4	47	1.2	300598	US-09-949-016-11868	Sequence 11868, A
C 5	47	1.2	302604	US-09-949-016-14588	Sequence 14588, A
C 6	47	1.2	302604	US-09-949-016-14589	Sequence 14589, A
C 7	47	1.2	308362	US-09-949-016-17119	Sequence 17119, A
8	46.8	1.2	832	US-09-621-976-2813	Sequence 2813, Ap
9	43.8	1.1	177251	US-09-949-016-15841	Sequence 15841, A
10	43.6	1.1	113701	US-09-949-016-13214	Sequence 13214, A
C 11	43	1.1	395	US-09-894-844-45	Sequence 45, Appl
C 12	43	1.1	1141	US-09-806-708B-22	Sequence 22, Appl
C 13	42.2	1.1	601	US-09-949-016-175160	Sequence 175160,
C 14	42	1.1	1141	US-09-806-708B-22	Sequence 22, Appl
C 15	41.2	1.0	13865	US-09-009-217-11	Sequence 11, Appl
C 16	41.2	1.0	13865	US-09-009-656-11	Sequence 11, Appl
C 17	41.2	1.0	13865	US-09-054-272-11	Sequence 11, Appl
C 18	41.2	1.0	16439	US-09-949-016-15745	Sequence 15745, A
C 19	40.8	1.0	601	US-09-949-016-201491	Sequence 201491
C 20	40.8	1.0	86639	US-09-949-016-17397	Sequence 17397, A
C 21	40.6	1.0	15722	US-09-949-016-16709	Sequence 16709, A
C 22	40.4	1.0	289	US-09-007-005-17	Sequence 17, Appl
C 23	40.4	1.0	289	US-09-244-796-17	Sequence 17, Appl
C 24	40.2	1.0	34372	US-09-949-016-13098	Sequence 13098, A

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C 41	38.2	1.0	90541	3	US-10-207-973-3	Sequence 3, Appli
C 42	38	1.0	601	3	US-09-949-016-196595	Sequence 196595,
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C 44	38	1.0	451925	3	US-09-949-016-17305	Sequence 17305, A
C 45	37.8	1.0	474	3	US-09-621-976-18033	Sequence 18033, A

ALIGNMENTS

RESULT 1
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; Sequence 4, Application US/09518386B
; Patent No. 6365386
; GENERAL INFORMATION:
; APPLICANT: HOSHINO, Tatsuo
; APPLICANT: OJIMA, Kazuyuki
; APPLICANT: SETOGUCHI, Yutaka
; TITLE OF INVENTION: ASTAXANTHIN SYNTHETASE
; FILE REFERENCE: ASTAXANTHIN SYNTHETASE
; CURRENT APPLICATION NUMBER: US/09/518,386B
; CURRENT FILING DATE: 2000-03-03
; PRIOR APPLICATION NUMBER: EP 99104668.1
; PRIOR FILING DATE: 1999-03-09
; PRIOR APPLICATION NUMBER: EP 00101666.6
; PRIOR FILING DATE: 2000-02-01
; NUMBER OF SEQ ID NOS: 32
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 4
; LENGTH: 3969
; TYPE: DNA
; ORGANISM: Phaffia rhodozyma
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; NAME/KEY: Intron
; LOCATION: (784)..(898)
; NAME/KEY: Intron
; LOCATION: (1016)..(1087)
; NAME/KEY: Intron
; LOCATION: (1180)..(1302)
; NAME/KEY: Intron
; LOCATION: (1518)..(1600)
; NAME/KEY: Intron
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; LOCATION: (1867)..(1939)
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Matches 3969; Conservative 0; Mismatches 0; Indels 0; Gaps 0;									
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Db 3901 AACTCAATATTCAGGCTCTTCATGCTCTGCTCTCCATAGATGATGATCTTCAATGTTGT 3960
Qy 3961 CGACTGCAG 3969
Db
Db 3961 CGACTGCAG 3969

RESULT 2
US-09-518-386B-2
; Sequence 2, Application US/09518386B

Db 18673 CTT 18675

RESULT 10

US-09-949-016-13214

; Sequence 13214, Application US/09949016

; Patent No. 6812339

; GENERAL INFORMATION:

; APPLICANT: VENTER, J. Craig et al.

; TITLE OF INVENTION: POLYMORPHISMS IN KNOWN GENES ASSOCIATED

; WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF

; FILE REFERENCE: C1001307

; CURRENT APPLICATION NUMBER: US/09/949,016

; CURRENT FILING DATE: 2000-04-14

; PRIOR APPLICATION NUMBER: 60/241,755

; PRIOR FILING DATE: 2000-10-20

; PRIOR APPLICATION NUMBER: 60/237,768

; PRIOR FILING DATE: 2000-10-03

; PRIOR APPLICATION NUMBER: 60/231,498

; PRIOR FILING DATE: 2000-09-08

; NUMBER OF SEQ ID NOS: 207012

; SOFTWARE: FastSeq for Windows Version 4.0

; SEQ ID NO 13214

; LENGTH: 113701

; TYPE: DNA

; ORGANISM: Human

US-09-949-016-13214

Query Match 1.1%; Score 43.6; DB 3; Length 113701;

Best Local Similarity 46.4%; Pred. No. 0.57;

Matches 142; Conservative 0; Mismatches 164; Indels 0; Gaps 0;

Qy 396 TCATCATCAGCCAGATCTTTTGTGATCGTTTATACATACCCGTCGATCTTAACCT 455

Db 20303 TCTTTCTCTTTCTTTCTTTCTTTCTTTCTTTCTTTCTTTCTTTCTTTCTTTCTTT 20362

Qy 456 TCTTTCTCTTTCTTTCTTTCTTTCTTTCTTTCTTTCTTTCTTTCTTTCTTTCTTTCTTT 515

Db 20363 TCTTTCTTTCTTTCTTTCTTTCTTTCTTTCTTTCTTTCTTTCTTTCTTTCTTTCTTT 20422

Qy 516 TGCCACCTACTTTTCCATATGTTTCATCTTGCTGTGTCACAGGTGCTTAGGCGCTGGC 575

Db 20423 TTTCTTTCTTTCTTTCTTTCTTTCTTTCTTTCTTTCTTTCTTTCTTTCTTTCTTTCT 20482

Qy 576 TGCTTTCTCANGGGATCCATAGCGTTCTTACGTCCTTTACCTCGCTCCGAGCGATCTTC 635

Db 20483 TTTATCCATCCATCCTTCTTTCTTTCTTTCTTTCTTTCTTTCTTTCTTTCTTTCTTT 20542

Qy 636 ACTGTATACCTTCAGGGTAAGAATGAGCTCTGGAATCATGCTTGTGTAATCCTATAA 695

Db 20543 TCTTTCTCGTACCCAGACTAGAGTGCAGTGGTGCATCTCTGCTAGTGTAACTTCTGG 20602

Qy 696 TCTCAT 701

Db 20603 CCTCAT 20608

RESULT 11

US-09-894-844-45/c

; Sequence 45, Application US/09894844

; Patent No. 6686166

; GENERAL INFORMATION:

; APPLICANT: Behr, Marcel

; APPLICANT: Small, Peter

; APPLICANT: Schoolnik, Gary

; APPLICANT: Wilson, Michael A.

; TITLE OF INVENTION: Molecular Differences Between Species of

; the M. Tuberculosis Complex

; FILE REFERENCE: STAN102CON

; CURRENT APPLICATION NUMBER: US/09/894,844

; CURRENT FILING DATE: 2001-06-27

; PRIOR APPLICATION NUMBER: 09/318,191

; PRIOR FILING DATE: 1999-05-25

US-09-894-844-45

Query Match 1.1%; Score 43; DB 3; Length 1141;

Best Local Similarity 9.7%; Pred. No. 0.029;

Matches 80; Conservative 312; Mismatches 426; Indels 5; Gaps 2;

Qy 2383 AGCTGATTAAGCACTAATAGAGCTTTATGTTTCTGTTGATCAGAACTTCTTCCA 2442

Db 2383 AGCTGATTAAGCACTAATAGAGCTTTATGTTTCTGTTGATCAGAACTTCTTCCA 2442

; PRIOR APPLICATION NUMBER: 60/097,936

; PRIOR FILING DATE: 1998-08-25

; NUMBER OF SEQ ID NOS: 137

; SOFTWARE: FastSeq for Windows Version 4.0

; SEQ ID NO 45

; LENGTH: 395

; TYPE: DNA

; ORGANISM: Mycobacteria tuberculosis

; FEATURE:

; NAME/KEY: misc feature

; LOCATION: (1)..(395)

; OTHER INFORMATION: n = A,T,C or G

; NAME/KEY: misc feature

; LOCATION: 27, 44, 104, 119, 180, 224, 237, 245, 301, 327, 370,

; LOCATION: 385, 393

; OTHER INFORMATION: n = A,T,C or G

US-09-894-844-45

Query Match 1.1%; Score 43; DB 3; Length 395;

Best Local Similarity 22.4%; Pred. No. 0.013;

Matches 59; Conservative 101; Mismatches 103; Indels 0; Gaps 0;

Qy 343 AGGCACCGATCAGGCAGAGGAGCCGAGGCGGAGAGAGACACACACCATCATCAT 402

Db 395 ARNGCCYSBNGSAASTTAHSHYACNDSDHYTWYTRBBBGBABWTAABAACBCCWTC 336

Qy 403 CAGCCATGCTTTTGTGATCGTTTATACATACCTCCGTCGATCTTAACCTTCTTCT 462

Db 335 CRBRCBNTBNTBTSBGBCTTYHCDTTHCTCNHYBTBTTBRTBHTSATATCBKBY 276

Qy 463 TCTTCTCTGCGATCTTTGCAATCTCTATCTCGTGTAAACATCGATCCGATCTTTCGCC 522

Db 275 YCTBTBBBTTCAACWCSRNMSHTMCSBNHYHCCSSNMCDSTACCVWTTNSBBBCACC 216

Qy 523 TACTTCTCCATATGTCATCTCTGCTTCTGCTCACAGTCTGTTAGCCTGGCTGCTTTC 582

Db 215 TWYWTBTBCCBMBBTBAATCWYSTRBTBTTBBCCASNCYHBCWTTTTCABBBCYCTCT 156

Qy 583 TCATGGCATCCATAGCGTTCTT 605

Db 155 TSBTKATBRGCTCWDSCRTYTT 133

RESULT 12

US-09-806-708B-22/c

; Sequence 22, Application US/09806708B

; Patent No. 6784342

; GENERAL INFORMATION:

; APPLICANT: The University of British Columbia

; TITLE OF INVENTION: Regulation of Embryonic Transcription in Plants

; FILE REFERENCE: 4810-58741

; CURRENT APPLICATION NUMBER: US/09/806,708B

; CURRENT FILING DATE: 2001-04-03

; PRIOR APPLICATION NUMBER: US 60/147,133

; PRIOR FILING DATE: 1999-08-04

; NUMBER OF SEQ ID NOS: 23

; SOFTWARE: PatentIn version 3.0

; SEQ ID NO 22

; LENGTH: 1141

; TYPE: DNA

; ORGANISM: Artificial sequence

; FEATURE:

; NAME/KEY: promoter

; LOCATION: (1)..(1141)

; OTHER INFORMATION: consensus sequence of A.t., L.a., and B.n. FAE1 promoters

US-09-806-708B-22

Query Match 1.1%; Score 43; DB 3; Length 1141;

Best Local Similarity 9.7%; Pred. No. 0.029;

Matches 80; Conservative 312; Mismatches 426; Indels 5; Gaps 2;

Qy 2383 AGCTGATTAAGCACTAATAGAGCTTTATGTTTCTGTTGATCAGAACTTCTTCCA 2442

Db 2383 AGCTGATTAAGCACTAATAGAGCTTTATGTTTCTGTTGATCAGAACTTCTTCCA 2442

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Db 927 MKAKNNNNNNAYTACYNRAATNNKMMKTHGAHSKERTRHHTTRTCERTKYNNNN 868
Qy 2443 CAGCTTTCAGCATGGATGTTTCACCGACTCTCAGAGACAAAGCCGTTTCAGGATAAACTTC 2502
Db 867 NARTVYVYHHAERWMAWTRTNNNNNNNNNACRNTRTWABWKHSWCNNNNNNNN 808
Qy 2503 GAGAAGAAATTTGTGCAGATCGACACGCGATAGCTACGCTGTGAGGATGTTTTGATGCT 2562
Db 807 NNNNTWCHYTTANABBCYRANNNNAARMARTCNMYHAAVTTTHTDWCYKTMNTWYWD 748
Qy 2563 AAATTAATCTCTCTTCGTAATGACTAAAGCCGCTTCATCTTCGATCCATCTTTAGAGAC 2622
Db 747 MTTTMBTTTTNNMTTSTNNNNNNNNWACNNNNNNMMKAYAHANNWGCWNNNDAR 688
Qy 2623 GAATTAATGGTTCCTATCTCGAAGCGGTTGGTCTCGATTCCTGGTCTTGT-CTTC 2681
Db 687 RTNNTTVMRRRWMTNTKTRWYSTTRRHHTYGATNNNNNNNNNNNNNNNSCCTCTRMWIM 628
Qy 2682 CAAATACAAATACGATTAATGCTCATCTGATTTGCGTCTACGGGCTGGGAATTAACATA 2741
Db 627 RWTNKGDMVTKVKWRDITCTTVDVWDSWVWYANWRCRDVTYTRNTYCKSYAHS 568
Qy 2742 GTTGTGTAAGAGTCTCTTCTGTCTAGACCTCTAGTCCGTATGCTAAACGCTGAATGCTT 2801
Db 567 YWYNSNNAMVRRYSARNSSMARWTTTRNNWMSGBVMRWAGTMMWRHNNNNNTDTRY 508
Qy 2802 AAAGGATGAAGCATGTTGGCTTCATCAGCGATAATTTTCATTTTCATATTCCTTTGTA 2861
Db 507 WWKWRARBTTTVYDSMCAKSMWRGNWRAKMMWAAANNDAGAMDHTWYMGNNMTMMR 448
Qy 2862 CATACGATACAGCTCAGCGAGTCAAAATTCGGCTTCCTCTCTGCTGCTCTTTTCT 2921
Db 447 RAWKMMNMACRRAYCANNNNNNACVHKHGMWRTWKYMWKAAACNNNNKAMTMRVAM 388
Qy 2922 GGCCTTTCTTATCTTCTTCAACAAAATTTGTACAGTTTCATCCCACTTGCCGAGC 2981
Db 387 MYSRDTLNTDMMWTSDBWHYVTDYTMRAWNNNNNNNNWBRCKTTSWMMWDMHMTHC 328
Qy 2982 CTGTCATGTCGAGATGGGTGCGTCATCAACGAGGTCGCGATCAGAAAGAACGATGG 3041
Db 327 TYGNNTWGSAYBMAAGASBNVTYNNCWMTYMGKTMNTNNNNNNKAWYRTTVA 268
Qy 3042 TCATGCTTCGTAAGTTTCTTTTATTCATCTGCTCCATGAAATAGTTCTGTAGACGC 3101
Db 267 WCNRYTYDVAWTKRNYKFCYABWYBYMGKHBBWNR----ABHRSNNMMWVKC 212
Qy 3102 GGACCAATTCAGCGTTGTTCAACATCAATCGTTCAAAAGTTCAITTTATGAGAGATGAG 3161
Db 211 RNKYMSWHYHAMRYBKWABAVGCNNNNWKKDMAHHHWCATNNNNMMWYAYMHMHKKGK 152
Qy 3162 AAGAAATTCAGTACAATTCGTTTCTTTTAAAGCCCAATCGGT 3204
Db 151 AAATNNKTABRDDHBAHVKTYYWYRYDYWCAMCMWNAKAVRT 109
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RESULT 13

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US-09-949-016-175160/c
; Sequence 175160, Application US/09949016
; Patent No. 6812339
; GENERAL INFORMATION:
; APPLICANT: VENTER, J. Craig et al.
; TITLE OF INVENTION: POLYMORPHISMS IN KNOWN GENES ASSOCIATED
; WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF
; FILE REFERENCE: CL001307
; CURRENT APPLICATION NUMBER: US/09/949,016
; CURRENT FILING DATE: 2000-04-14
; PRIOR APPLICATION NUMBER: 60/241,755
; PRIOR FILING DATE: 2000-10-20
; PRIOR APPLICATION NUMBER: 60/237,768
; PRIOR FILING DATE: 2000-10-03
; PRIOR APPLICATION NUMBER: 60/231,498
; PRIOR FILING DATE: 2000-09-08
; NUMBER OF SEQ ID NOS: 207012
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; SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 175160
; LENGTH: 601
; TYPE: DNA
; ORGANISM: Human
US-09-949-016-175160

Query Match 1.1%; Score 42.2; DB 3; Length 601;
Best Local Similarity 54.1%; Pred. No. 0.032;
Matches 86; Conservative 0; Mismatches 73; Indels 0; Gaps 0;

Qy 408 ATGCTCTTTTGTGATCGTTTTTACATACCTACCCGTCGATTTCTAACTCTTCTTCTTC 467
Db 382 AUGTAATTAATGTTTGGTTTTTTTCTTCTTCTTCTTCTTCTTCTTCTTCTTCTTCTT 323
Qy 468 TCTTGCCATCTTTGCAATCTCTATCTGTCGTGAACATCGATCCGATTTCTTGCCACCTACT 527
Db 322 TCCTTCTTCTTCTTCTTCTTCTTCTTCTTCTTCTTCTTCTTCTTCTTCTTCTTCTTCTT 263
Qy 528 TCTCCATATGTTTCATCTTGGTCTTGTCTCACAGTGCTTT 566
Db 262 TCTTCTTCTTCTTCTTCTTCTTCTTCTTCTTCTTCTTCTTCTTCTTCTTCTTCTTCTT 224

RESULT 14
US-09-806-708B-22
; Sequence 22, Application US/09806708B
; Patent No. 6784342
; GENERAL INFORMATION:
; APPLICANT: The University of British Columbia
; TITLE OF INVENTION: Regulation of Embryonic Transcription in Plants
; FILE REFERENCE: 4810-58741
; CURRENT APPLICATION NUMBER: US/09/806,708B
; PRIOR FILING DATE: 2001-04-03
; PRIOR APPLICATION NUMBER: US 60/147,133
; PRIOR FILING DATE: 1999-08-04
; NUMBER OF SEQ ID NOS: 23
; SOFTWARE: PatentIn version 3.0
; SEQ ID NO 22
; LENGTH: 1141
; TYPE: DNA
; ORGANISM: Artificial sequence
; FEATURE:
; NAME/KEY: promoter
; LOCATION: (1)..(1141)
; OTHER INFORMATION: consensus sequence of A.t., L.a., and B.n. FAEL promoters
US-09-806-708B-22
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Query Match 1.1%; Score 42; DB 3; Length 1141;
Best Local Similarity 10.8%; Pred. No. 0.06;
Matches 96; Conservative 339; Mismatches 450; Indels 7; Gaps 4;

Qy 2510 AATTTCATGATCGACACGATATGCTACGCTGTGAGGATGTTTGTGATGTAATAATTAC 2569
Db 61 WARMYCKYRRWYNNKSRWKKWYKWBANNTSRYHARRWKDMKTAYBMTMTNKWGK 120
Qy 2570 TTCTTCTGCAATGACTAAAGCGCTTCATCTTGTATCCATTTTAGAGACGAACTTA 2629
Db 121 TGRHRYWRWRAWBDTVDHYYVTAMNNAWTTTCMDMDKDDKTRTMMWKKNNNATGWD DTK 180
Qy 2630 ATGCGTTGCTTATCTCGAAGCGGTTGTTCTGCAATTTCTTGTCTTCTTCCAAATACA 2689
Db 181 YHWNNGGCTVTVWYRYKTDWBSKRMNYGMBWKNWSYDVYVWVWDDCKKRVRR 240
Qy 2690 ATACGGATTAATGCTCATCTGATTTGCTCTACGGCTGTGGAAATTAAGTTTGTGA 2749
Db 241 WVRTRGRMRYMVAVB-TAHRRRYNGWBTBAMAYRRWWTWNNNNNNNAKMKRAKYGWNR 239
Qy 2750 AGGATGCTCTTCTGCTAGACCTCTAGTCCGTCGATGCTAACCGTGAATGCTTAAAGATG 2809
Db 300 ABVNSTCTTWKSKTTKVRTSCWANNCRAGDANKDKHKKWKSAAAGVYNNNNNNNTYKK 359
Qy 2810 AAGACGTATGTTGGCTTTCATCAGCGATAATTTTTCATTTCTTCTTCTTGTACATACGCA 2869
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GenCore version 5.1.6
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OM nucleic - nucleic search, using sw model

Run on: November 21, 2005, 05:01:58 ; Search time 140 Seconds

(without alignments)
1813.897 Million cell updates/sec

Title: US-10-066-007A-2

Perfect score: 1932

Sequence: 1 gaattcgccagggccacc.....agccggctctgcccgaattc 1932

Scoring table: IDENTITY NUC

Gapop 10.0 , Gapext 1.0

Searched: 3196817 seqs, 65720914 residues

Total number of hits satisfying chosen parameters: 6393634

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%

Maximum Match 100%

Listing first 45 summaries

Database : Published Applications NA New:*

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3: /cgn2_6/ptodata/2/pubpna/US07_NEW_PUB_seq.*
4: /cgn2_6/ptodata/2/pubpna/US08_NEW_PUB_seq.*
5: /cgn2_6/ptodata/2/pubpna/US09_NEW_PUB_seq.*
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10: /cgn2_6/ptodata/2/pubpna/US60_NEW_PUB_seq.*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	ID	Description
1	41.4	2.1	2487	1	US-10-689-742-165
2	39	2.0	2030	1	US-10-652-893-3
3	38.8	2.0	2132	1	US-10-689-742-171
4	37.4	1.9	687	1	US-10-986-501-107
5	37.4	1.9	832	1	US-10-986-501-18
6	37.4	1.9	2298	1	US-10-689-742-69
7	37.2	1.9	3721	1	US-10-131-826A-543
8	37.2	1.9	3734	1	US-10-131-826A-147
9	37.2	1.9	340000	7	US-11-102-978-3
10	36.8	1.9	340000	7	US-11-102-978-3
11	36.6	1.9	2343	1	US-10-131-826A-107
12	36.6	1.9	3495	1	US-10-689-742-167
13	36.4	1.9	2276	1	US-10-131-826A-9
14	36.2	1.9	2625	7	US-11-102-978-12
15	36	1.9	1425	1	US-10-689-742-131
16	35.8	1.9	2719	1	US-10-652-893-1
17	35.6	1.8	1658	7	US-11-034-569-15
18	35.4	1.8	1968	1	US-10-131-826A-163
19	35.4	1.8	12482	9	US-11-090-878-25
20	35.4	1.8	55763	1	US-10-972-766-1
21	35	1.8	1687	1	US-10-131-826A-263
22	34.6	1.8	722	1	US-10-689-742-79
23	34.6	1.8	1257	1	US-10-689-742-115

Sequence 51, Appl
Sequence 99, Appl
Sequence 391, App
Sequence 207, App
Sequence 345, App
Sequence 499, App
Sequence 161, App
Sequence 91, Appl
Sequence 251, App
Sequence 8, Appl
Sequence 60, Appl
Sequence 181, App
Sequence 53, Appl
Sequence 143, App
Sequence 37, Appl
Sequence 105, App
Sequence 351, App
Sequence 15, Appl
Sequence 3, Appl
Sequence 481, App
Sequence 533, App
Sequence 57, Appl

ALIGNMENTS

RESULT 1
US-10-689-742-165
; Sequence 165, Application US/10689742
; Publication No. US20050250180A1
; GENERAL INFORMATION:
; APPLICANT: Jacobs, Kenneth
; APPLICANT: McCoy, John M
; APPLICANT: LaValle, Edward R
; APPLICANT: Racie, Lisa A
; APPLICANT: Evans, Cheryl
; APPLICANT: Merberg, David
; APPLICANT: Treacy, Maurice
; APPLICANT: Spaulding, Vikki
; TITLE OF INVENTION: SECRETED PROTEINS AND POLYNUCLEOTIDES ENCODING THEM
; FILE REFERENCE: 00766.000091.10
; CURRENT APPLICATION NUMBER: US/10/689,742
; CURRENT FILING DATE: 2003-10-22
; PRIOR APPLICATION NUMBER: 09/746,783
; PRIOR FILING DATE: 2000-12-21
; NUMBER OF SEQ ID NOS: 231
; SOFTWARE: PatentIn version 3.2
; SEQ ID NO 165
; LENGTH: 2487
; TYPE: DNA
; ORGANISM: Homo sapiens
US-10-689-742-165

Query Match 2.1%; Score 41.4; DB 1; Length 2487;
Best Local Similarity 57.3%; Pred. No. 0.24;
Matches 75; Conservative 0; Mismatches 56; Indels 0; Gaps 0;
QY 1771 TTGTGATCGATTGTTCTTCTACCCGGCGAGCGCTATGACTTCTACGTCTATCGT 1830
Db 2271 TTTGTTTCACTGAATGTTCAATGTTTAAATGGCGATTAAATACTCTGCTGTATAGT 2330
QY 1831 CGCTCTGGACTCTTCTTACCCCTATATATTTCCATCCGAAAAAATAAAAAA 1890
Db 2331 AGTTTGTAGTAAATATTTTGAATAAATAATCTGCCCGGATAAAAAAATAAAAAA 2390
QY 1891 AAAAAAATAA 1901
Db 2391 AAAAAAATAA 2401

RESULT 2
US-10-652-893-3


```
RESULT 8
US-10-131-826A-147
; Sequence 147, Application US/10131826A
; Publication No. US20050245730A1
; GENERAL INFORMATION:
; APPLICANT: Baker, Kevin P.
; APPLICANT: Beresini, Maureen
; APPLICANT: DeForge, Laura
; APPLICANT: Desnoyers, Luc
; APPLICANT: Filvaroff, Ellen
; APPLICANT: Gao, Wei-Qiang
; APPLICANT: Gerritsen, Mary E.
; APPLICANT: Goddard, Audrey
; APPLICANT: Godowski, Paul J.
; APPLICANT: Gurney, Austin L.
; APPLICANT: Sherwood, Steven
; APPLICANT: Smith, Victoria
; APPLICANT: Stewart, Timothy A.
; APPLICANT: Tumas, Daniel
; APPLICANT: Watanabe, Colin K
; APPLICANT: Wood, William
; APPLICANT: Zhang, Zemin
; TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC
; FILE OF INVENTION: ACIDS ENCODING THE SAME
; FILE REFERENCE: P3330R1C128
; CURRENT APPLICATION NUMBER: US/10/131,826A
; CURRENT FILING DATE: 2002-04-24
; PRIOR APPLICATION NUMBER: 60/049911
; PRIOR FILING DATE: 1997-06-18
; PRIOR APPLICATION NUMBER: 60/056974
; PRIOR FILING DATE: 1997-08-26
; PRIOR APPLICATION NUMBER: 60/059113
; PRIOR FILING DATE: 1997-09-17
; PRIOR APPLICATION NUMBER: 60/059115
; PRIOR FILING DATE: 1997-09-17
; PRIOR APPLICATION NUMBER: 60/059117
; PRIOR FILING DATE: 1997-09-17
; PRIOR APPLICATION NUMBER: 60/059122
; PRIOR FILING DATE: 1997-09-17
; PRIOR APPLICATION NUMBER: 60/059184
; PRIOR FILING DATE: 1997-09-17
; PRIOR APPLICATION NUMBER: 60/059263
; PRIOR FILING DATE: 1997-09-18
; PRIOR APPLICATION NUMBER: 60/059352
; PRIOR FILING DATE: 1997-09-19
; PRIOR APPLICATION NUMBER: 60/059588
; PRIOR FILING DATE: 1997-09-19
; Remaining Prior Application data removed - See File Wrapper or PALM.
; NUMBER OF SEQ ID NOS: 550
; SEQ ID NO 147
; LENGTH: 3734
; TYPE: DNA
; ORGANISM: Homo Sapien
US-10-131-826A-147

Query Match      1.9%; Score 37.2; DB 1; Length 3734;
Best Local Similarity 72.7%; Pred. No. 2.9;
Matches 48; Conservative 0; Mismatches 18; Indels 0; Gaps 0;

QY 1836 TGGACTCTCTCTTACCCATATATATTCATCCGAAAAAAAAAAAAAAAAAAAAAAAAAAAA 1895
      ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
Db 3658 TGGACAGACCTCAGATCCATTAAAGTGTTCTCACTTCAAAAAAAAAAAAAAAAAAAAAAA 3717

QY 1896 AAAAAA 1901
      |||||
Db 3718 AAAAAA 3723

RESULT 9
US-11-102-978-3/c
; Sequence 3, Application US/11102978
; Publication No. US20050250142A1
; GENERAL INFORMATION:
; APPLICANT: University of Utah Technology Transfer Office
; APPLICANT: University of Utah Research Foundation
; TITLE OF INVENTION: Diagnosis and Treatment of Herpes Simplex Virus Disease
; FILE REFERENCE: 0274-5537.1US
; CURRENT APPLICATION NUMBER: US/11/102,978
; CURRENT FILING DATE: 2005-04-11
; PRIOR APPLICATION NUMBER: PCT/US2003/033152
; PRIOR FILING DATE: 2003-10-18
; PRIOR APPLICATION NUMBER: 60/419,576
; PRIOR FILING DATE: 2002-10-18
; NUMBER OF SEQ ID NOS: 13
; SOFTWARE: Patent in version 3.2
; SEQ ID NO 3
; LENGTH: 340000
; TYPE: DNA
; ORGANISM: Homo sapiens
; FEATURE:
; NAME/KEY: exon
; LOCATION: (56948)..(57115)
; OTHER INFORMATION: C21orf34 exon
; FEATURE:
; NAME/KEY: misc feature
; LOCATION: (80066)..(81089)
; OTHER INFORMATION: Gene VDACC2P; voltage-dependent anion channel isoform 2 pseudogene
; FEATURE:
; NAME/KEY: exon
; LOCATION: (167308)..(167438)
; OTHER INFORMATION: C21orf34 exon
; FEATURE:
; NAME/KEY: exon
; LOCATION: (216732)..(216833)
; OTHER INFORMATION: C21orf34 exon
US-11-102-978-3

Query Match      1.9%; Score 37.2; DB 7; Length 340000;
Best Local Similarity 77.6%; Pred. No. 13;
Matches 45; Conservative 0; Mismatches 13; Indels 0; Gaps 0;

QY 1872 AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAGCGCGCTCGAGCGGCTCGTGCCGAA 1929
      ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
Db 158678 AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAGCGCGGCGGCGCGGCGGCGGCGGAA 158621

RESULT 10
US-11-102-978-3
; Sequence 3, Application US/11102978
; Publication No. US20050250142A1
; GENERAL INFORMATION:
; APPLICANT: University of Utah Technology Transfer Office
; APPLICANT: University of Utah Research Foundation
; TITLE OF INVENTION: Diagnosis and Treatment of Herpes Simplex Virus Disease
; FILE REFERENCE: 0274-5537.1US
; CURRENT APPLICATION NUMBER: US/11/102,978
; CURRENT FILING DATE: 2005-04-11
; PRIOR APPLICATION NUMBER: PCT/US2003/033152
; PRIOR FILING DATE: 2003-10-18
; PRIOR APPLICATION NUMBER: 60/419,576
; PRIOR FILING DATE: 2002-10-18
; NUMBER OF SEQ ID NOS: 13
; SOFTWARE: Patent in version 3.2
; SEQ ID NO 3
; LENGTH: 340000
; TYPE: DNA
; ORGANISM: Homo sapiens
; FEATURE:
; NAME/KEY: exon
; LOCATION: (56948)..(57115)
; OTHER INFORMATION: C21orf34 exon
; FEATURE:
; NAME/KEY: misc feature
; LOCATION: (80066)..(81089)
; OTHER INFORMATION: Gene VDACC2P; voltage-dependent anion channel isoform 2 pseudogene
; FEATURE:
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; NAME/KEY: exon
; LOCATION: (167308)..(167438)
; OTHER INFORMATION: C21orf34 exon
; FEATURE:
; NAME/KEY: exon
; LOCATION: (216732)..(216833)
; OTHER INFORMATION: C21orf34 exon
US-11-102-978-3

Query Match      1.9%; Score 36.8; DB 7; Length 340000;
Best Local Similarity 69.4%; Pred. No. 16;
Matches 50; Conservative 0; Mismatches 22; Indels 0; Gaps 0;

Qy 1835 CTGACACTCTCTTACCCCTATATATTTCCATCCGAAAAAAAAAAAAAAAAAAAAA 1894
Db 151459 CTGGATTATCTCATCTCAATAGTAAAAA 151518

Qy 1895 AAAAAAAGCGC 1906
Db 151519 AAAAAAAGGC 151530
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RESULT 11
US-10-131-826A-107
; Sequence 107, Application US/10131826A
; Publication No. US20050245730A1
; GENERAL INFORMATION:
; APPLICANT: Baker, Kevin P.
; APPLICANT: Beresini, Maureen
; APPLICANT: DeForge, Laura
; APPLICANT: Desnoyers, Luc
; APPLICANT: Filvaroff, Ellen
; APPLICANT: Gao, Wei-Qiang
; APPLICANT: Gerritsen, Mary E.
; APPLICANT: Goddard, Audrey
; APPLICANT: Godowski, Paul J.
; APPLICANT: Gurney, Austin L.
; APPLICANT: Sherwood, Steven
; APPLICANT: Smith, Victoria
; APPLICANT: Stewart, Timothy A.
; APPLICANT: Tamas, Daniel
; APPLICANT: Watanabe, Colin K
; APPLICANT: Wood, William
; APPLICANT: Zhang, Zemin
; TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC
; FILE REFERENCE: P330R1C128
; CURRENT APPLICATION NUMBER: US/10/131,826A
; CURRENT FILING DATE: 2002-04-24
; PRIOR APPLICATION NUMBER: 60/049911
; PRIOR FILING DATE: 1997-06-18
; PRIOR APPLICATION NUMBER: 60/056974
; PRIOR FILING DATE: 1997-08-26
; PRIOR APPLICATION NUMBER: 60/059113
; PRIOR FILING DATE: 1997-09-17
; PRIOR APPLICATION NUMBER: 60/059115
; PRIOR FILING DATE: 1997-09-17
; PRIOR APPLICATION NUMBER: 60/059117
; PRIOR FILING DATE: 1997-09-17
; PRIOR APPLICATION NUMBER: 60/059122
; PRIOR FILING DATE: 1997-09-17
; PRIOR APPLICATION NUMBER: 60/059184
; PRIOR FILING DATE: 1997-09-17
; PRIOR APPLICATION NUMBER: 60/059263
; PRIOR FILING DATE: 1997-09-18
; PRIOR APPLICATION NUMBER: 60/059352
; PRIOR FILING DATE: 1997-09-19
; PRIOR APPLICATION NUMBER: 60/059588
; PRIOR FILING DATE: 1997-09-19
; Remaining Prior Application data removed - See File Wrapper or PALM.
; NUMBER OF SEQ ID NOS: 550
; SEQ ID NO 107
; LENGTH: 2343
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; TYPE: DNA
; ORGANISM: Homo Sapien
US-10-131-826A-107

Query Match      1.9%; Score 36.6; DB 1; Length 2343;
Best Local Similarity 51.5%; Pred. No. 3.5;
Matches 84; Conservative 0; Mismatches 79; Indels 0; Gaps 0;

Qy 1003 TGTCGGATGAGGAGTACTCGCTCAGATCAGTAACCTGTTATTGCTGGATATGAAACTT 1062
Db 1135 TCTCAGATATTGATGTACACTCTGAAGTGAAGCATTCTCTGTTGGCAGGACATGACACCT 1194
Qy 1063 CTTTCGACAGTCTTGAACATGATGTTTTCACCGACTCTCAGAAAGACAAAGCCGTTTCAGGATA 1122
Db 1195 TGGCAGCAACATCTCTGGATCCTTTACTGCTGCTCTGAACCTTGAGCATCAAGAGA 1254
Qy 1123 AACTTCGAGAGAAATTTGTCAGATCGACACGGATATGCTTAC 1165
Db 1255 GATGCCGGAGGAGGTTCAGGGGATCTCTGGGGGATGGTCTTTC 1297

RESULT 12
US-10-689-742-167
; Sequence 167, Application US/10689742
; Publication No. US20050250180A1
; GENERAL INFORMATION:
; APPLICANT: Jacobs, Kenneth
; APPLICANT: McCoy, John M
; APPLICANT: LaVallie, Edward R
; APPLICANT: Racie, Lisa A
; APPLICANT: Evans, Cheryl
; APPLICANT: Merberg, David
; APPLICANT: Treacy, Maurice
; APPLICANT: Spaulding, Vikki
; TITLE OF INVENTION: SECRETED PROTEINS AND POLYNUCLEOTIDES ENCODING THEM
; FILE REFERENCE: 00766.000091.10
; CURRENT APPLICATION NUMBER: US/10/689,742
; CURRENT FILING DATE: 2003-10-22
; PRIOR APPLICATION NUMBER: 09/746,783
; PRIOR FILING DATE: 2000-12-21
; NUMBER OF SEQ ID NOS: 231
; SOFTWARE: PatentIn version 3.2
; SEQ ID NO 167
; LENGTH: 3495
; TYPE: DNA
; ORGANISM: Homo sapiens
US-10-689-742-167

Query Match      1.9%; Score 36.6; DB 1; Length 3495;
Best Local Similarity 71.6%; Pred. No. 4;
Matches 48; Conservative 0; Mismatches 19; Indels 0; Gaps 0;

Qy 1835 CTGACACTCTCTTACCCCTATATATTTCCATCCGAAAAAAAAAAAAAAAAAAAAA 1894
Db 3414 CTTGACTATATGTTGTATTAAATTTGTTTACGAAAAAAAAAAAAAAAAAAAAA 3473

Qy 1895 AAAAAA 1901
Db 3474 AAAAAA 3480

RESULT 13
US-10-131-826A-9
; Sequence 9, Application US/10131826A
; Publication No. US20050245730A1
; GENERAL INFORMATION:
; APPLICANT: Baker, Kevin P.
; APPLICANT: Beresini, Maureen
; APPLICANT: DeForge, Laura
; APPLICANT: Desnoyers, Luc
; APPLICANT: Filvaroff, Ellen
; APPLICANT: Gao, Wei-Qiang
; APPLICANT: Gerritsen, Mary E.
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; PRIOR APPLICATION NUMBER: 09/746,783
; PRIOR FILING DATE: 2000-12-21
; NUMBER OF SEQ ID NOS: 231
; SOFTWARE: PatentIn version 3.2
; SEQ ID NO 131
; LENGTH: 1425
; TYPE: DNA
; ORGANISM: Homo sapiens
US-10-689-742-131
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Query Match      1.9%; Score 36; DB 1; Length 1425;
Best Local Similarity 80.8%; Pred. No. 4.1;
Matches 42; Conservative 0; Mismatches 10; Indels 0; Gaps 0;

Qy 1850 ACCCTATATATTTCATCGAAAAA 1901
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Db 1374 ACCCTGCTTTTGTTCAAAAA 1425
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Job time : 142 secs

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GenCore version 5.1.6
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OM nucleic - nucleic search, using sw model

Run on: November 21, 2005, 04:54:37 ; Search time 1091 Seconds
(without alignments)
14643.848 Million cell updates/sec

Title: US-10-066-007A-2

Perfect score: 1932

Sequence: 1 gaattcgccagggccacc.....agccggctgtgcgaattc 1932

Scoring table: IDENTITY_NUC

Gapop 10.0 , Gapext 1.0

Searched: 9793542 seqs, 4134689005 residues

Total number of hits satisfying chosen parameters: 19587084

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%

Maximum Match 100%

Listing first 45 summaries

Database : Published Applications NA Main.*

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10: /cgn2_6/ptodata/1/pubpna/US11_PUBCOMB.seq.*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

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2	353.2	18.3	3969	5	US-10-066-007-4
3	51.8	2.7	702	8	US-10-739-930-3162
4	49.8	2.6	333	8	US-10-425-115-54628
5	49.8	2.6	467	7	US-10-424-599-20949
6	49.4	2.6	1501	6	US-10-264-237-392
7	49.2	2.5	368	7	US-10-424-599-1793
8	48.4	2.5	657	7	US-10-424-599-25496
9	48.4	2.5	1458	8	US-10-690-991-1
10	48.4	2.5	1458	9	US-10-833-296-1
11	48.4	2.5	1458	9	US-10-516-338-7
12	48.4	2.5	1458	10	US-11-076-967-1
13	48.4	2.5	1512	6	US-10-313-963A-55
14	48.4	2.5	1512	9	US-10-745-237-407
15	48.4	2.5	2011	3	US-09-880-107-1586
16	48.4	2.5	2059	7	US-10-641-643-1062
17	48.4	2.5	2759	5	US-10-146-575-1
18	48.4	2.5	2768	6	US-10-268-822-1
19	48.4	2.5	2768	6	US-10-388-360-297
20	48.4	2.5	2768	6	US-10-388-360-363
21	48.4	2.5	2849	3	US-09-880-107-2110
22	48.2	2.5	312	3	US-09-960-352-4611
23	47.6	2.5	1400	10	US-11-060-756-1217

ALIGNMENTS

RESULT 1

US-10-066-007-2
; Sequence 2, Application US/10066007
; Publication No. US20030077691A1
; GENERAL INFORMATION:
; APPLICANT: HOSHINO, Tatsuo
; APPLICANT: OJIMA, Kazuyuki
; TITLE OF INVENTION: ASTAXANTHIN SYNTHETASE
; FILE REFERENCE: ASTAXANTHIN SYNTHETASE
; CURRENT APPLICATION NUMBER: US/10/066,007
; CURRENT FILING DATE: 2001-02-01
; PRIOR APPLICATION NUMBER: US/09/518,386
; PRIOR FILING DATE: 2000-03-03
; PRIOR APPLICATION NUMBER: EP 99104668.1
; PRIOR FILING DATE: 1999-03-09
; PRIOR APPLICATION NUMBER: EP 00101666.6
; PRIOR FILING DATE: 2000-02-01
; NUMBER OF SEQ ID NOS: 32
; SOFTWARE: Patent In Ver. 2.1
; SEQ ID NO 2
; LENGTH: 1932
; TYPE: DNA
; ORGANISM: Phaffia rhodozyma
; FEATURE:
; NAME/KEY: CDS
; LOCATION: (33)..(1706)
; NAME/KEY: polyA site
; LOCATION: (1871)
; NAME/KEY: mRNA
; LOCATION: (14)..(1891)
; US-10-066-007-2

Query Match 100.0%; Score 1932; DB 5; Length 1932;

Best Local Similarity 100.0%; Pred. No. 0;

Matches 1932; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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1 GAATTCGGCAGAGGCCACCTTCTTCCATATGTTTCATCTTGGTCTTGTCTCACAGGTG 60

QY 61 CTTTAGGCTCGGCTGCTTTCTTCATGGGCATCCATAGCGTCTTTCAGTCTTTACCTCGGCTC 120

DB 61 CTTTAGGCTCGGCTGCTTTCTTCATGGGCATCCATAGCGTCTTTCAGTCTTTACCTCGGCTC 120

QY 121 CGAGCGCATCTTCACTGTATAACCTTCAGGGCCCGAATCATACCAACTACTTTACAGGCA 180

Sequence 5489, Ap
Sequence 268, App
Sequence 71313, A
Sequence 29, Appl
Sequence 41374, A
Sequence 12, Appl
Sequence 32438, A
Sequence 162, App
Sequence 33072, A
Sequence 8656, Ap
Sequence 75080, A
Sequence 155277, A
Sequence 23175, A
Sequence 106, App
Sequence 106, App
Sequence 106, App
Sequence 105, App
Sequence 105, App
Sequence 33549, A
Sequence 72966, A
Sequence 18917, A

24 47.6 2.5 1400 10 US-11-060-756-5489
25 47.6 2.5 3059 3 US-09-925-297-268
26 47.4 2.5 628 7 US-10-424-599-71313
27 47.4 2.5 1410 7 US-10-395-463-29
28 47.4 2.5 1702 7 US-10-437-963-41374
29 47.4 2.5 2160 7 US-10-632-983-12
30 47.2 2.4 1228 7 US-10-424-599-32438
31 47 2.4 218 3 US-09-933-797-162
32 47 2.4 445 8 US-10-357-930-39072
33 47 2.4 685 7 US-10-424-599-8656
34 46.8 2.4 709 7 US-10-424-599-75080
35 46.8 2.4 1081 8 US-10-425-115-155277
36 46.8 2.4 1151 7 US-10-424-599-23175
37 46.8 2.4 1712 3 US-09-981-876-106
38 46.8 2.4 1712 9 US-10-979-111-106
39 46.8 2.4 1712 3 US-09-981-876-105
40 46.8 2.4 1822 3 US-09-148-545-105
41 46.8 2.4 1822 9 US-10-979-111-105
42 46.8 2.4 1822 9 US-10-424-599-33549
43 46.6 2.4 1091 7 US-10-424-599-72966
44 46.4 2.4 1419 7 US-10-424-599-72966
45 46.4 2.4 1552 10 US-11-097-143-18917

Db	121	CGAGCGATCTTCACTGTATAACCTTTACGGGCCCGAATCATACCAACTACTTTTACAGCA	180
Qy	181	ATTTTTTAGACATCCTCTCAGCTCGTACAGGTGAAGAGCATCGCAAGTACAGAGAAAAT	240
Db	181	ATTTTTTAGACATCCTCTCAGCTCGTACAGGTGAAGAGCATCGCAAGTACAGAGAAAAT	240
Qy	241	ACGAAGCACCTCGGTTTCTCGGTGGATCGCTGGAGCACCCGCTTTGAACTCTCGACCGATC	300
Db	241	ACGAAGCACCTCGGTTTCTCGGTGGATCGCTGGAGCACCCGCTTTGAACTCTCGACCGATC	300
Qy	301	CGAAGTCTTCAACCATGTGATGAAGAAGCTACGACTATCCGAAACCTGATGTCGCG	360
Db	301	CGAAGTCTTCAACCATGTGATGAAGAAGCTACGACTATCCGAAACCTGATGTCGCG	360
Qy	361	CTCGAGTGTCTCAGAAATTGCTACCGAGATGTGTGTTTACCGCGGAAGTGAAGCTCAT	420
Db	361	CTCGAGTGTCTCAGAAATTGCTACCGAGATGTGTGTTTACCGCGGAAGTGAAGCTCAT	420
Qy	421	AGGCACATCGAAGGATCATGATCCCTCTCTGTCGGCTCAGCCGCTTAAGTCGATGCTC	480
Db	421	AGGCACATCGAAGGATCATGATCCCTCTCTGTCGGCTCAGCCGCTTAAGTCGATGCTC	480
Qy	481	CAATTTTCTTGAAGAAAAGGTATGAACTTGTTCGAACAAGATGATCGAGGATCGCGCTCAGA	540
Db	481	CAATTTTCTTGAAGAAAAGGTATGAACTTGTTCGAACAAGATGATCGAGGATCGCGCTCAGA	540
Qy	541	AGGATATGGCCGTGGGAGATCGGCCGTGAAAAAGAGGCAACAGACTCTGAGACCGAAG	600
Db	541	AGGATATGGCCGTGGGAGATCGGCCGTGAAAAAGAGGCAACAGACTCTGAGACCGAAG	600
Qy	601	GAGTCGATGTAAGAGATTGGGTGGTCSAGCTACTCTTGGACGTCATGGCTCTTCGAGGAT	660
Db	601	GAGTCGATGTAAGAGATTGGGTGGTCSAGCTACTCTTGGACGTCATGGCTCTTCGAGGAT	660
Qy	661	TTGACTATAAGAGCGACTCGCTCAGAAACAAGTGAAGTCTATGTGCTTTTGTCTG	720
Db	661	TTGACTATAAGAGCGACTCGCTCAGAAACAAGTGAAGTCTATGTGCTTTTGTCTG	720
Qy	721	GACTTACCGATGGTGTGCTCCTACCTTGGACTCGTTCAAGGCTCATATGTTGGATTTTG	780
Db	721	GACTTACCGATGGTGTGCTCCTACCTTGGACTCGTTCAAGGCTCATATGTTGGATTTTG	780
Qy	781	TACCTTACTTCGGAACATGAAACCGAGACATGAGATACCTTTGACTCAAGGATTAGCAG	840
Db	781	TACCTTACTTCGGAACATGAAACCGAGACATGAGATACCTTTGACTCAAGGATTAGCAG	840
Qy	841	TTTTCCGACGATTTGGATCGAGCTTATGGAGCAAAAGACGCGCGTCTGGCTCAG	900
Db	841	TTTTCCGACGATTTGGATCGAGCTTATGGAGCAAAAGACGCGCGTCTGGCTCAG	900
Qy	901	CTTCCGATCAGGCTGTTGATAAAAAGGATGTTCAAGGTTCGGATATCCTTAAGTCTCCTAG	960
Db	901	CTTCCGATCAGGCTGTTGATAAAAAGGATGTTCAAGGTTCGGATATCCTTAAGTCTCCTAG	960
Qy	961	TGAGAGCAACATCGCGCCCAACCTGCTGAAATCTCAAAAAGCTGTCGATGAGAGGTAC	1020
Db	961	TGAGAGCAACATCGCGCCCAACCTGCTGAAATCTCAAAAAGCTGTCGATGAGAGGTAC	1020
Qy	1021	TCGCTCAGATCAGTAACTGTTATTTGCTGGATGAACTTCTTTCACACAGTCTTTGACAT	1080
Db	1021	TCGCTCAGATCAGTAACTGTTATTTGCTGGATGAACTTCTTTCACACAGTCTTTGACAT	1080
Qy	1081	GGATGTTTCCCGACTCTCAGAAGACAAAGCCGTTCCAGGATAAACTTCGAGAGAAAATTT	1140
Db	1081	GGATGTTTCCCGACTCTCAGAAGACAAAGCCGTTCCAGGATAAACTTCGAGAGAAAATTT	1140
Qy	1141	GTCAATCGCACGGATATCGCTACGCTAGACGAACTTAATGCGTTCGCTTACTCTGAAG	1200
Db	1141	GTCAATCGCACGGATATCGCTACGCTAGACGAACTTAATGCGTTCGCTTACTCTGAAG	1200
Qy	1201	CGTTTGTAAAGGAGTCTCTTCGCTAGACCCCTCCTAGTCCGATATGCTTAACCCGTGAATGCT	1260

Db	1201	CGTTTGTAAAGGACTCTCTTCGCTTAGACCCCTCCTAGTCGGTAGTGTAAACCGTGAATGCT	1260
Qy	1261	TAAAGGATGAAGACTTTCATCCCACTTCCGAGAGCCTGTCAATTGCTCGAGATGGGTCGGTCA	1320
Db	1261	TAAAGGATGAAGACTTTCATCCCACTTCCGAGAGCCTGTCAATTGCTCGAGATGGGTCGGTCA	1320
Qy	1321	TCAAACGAGGTCGGGATCACGAAAGGAAACGATGTCATGCTTCGGTTGTTTCAACATCAATC	1380
Db	1321	TCAAACGAGGTCGGGATCACGAAAGGAAACGATGTCATGCTTCGGTTGTTTCAACATCAATC	1380
Qy	1381	GTTTCAAAGTTCATTTATGGAGAAGATGCAGAAAGAAATTCAGACCGGAGAGGTGGCTTGAGG	1440
Db	1381	GTTTCAAAGTTCATTTATGGAGAAGATGCAGAAAGAAATTCAGACCGGAGAGGTGGCTTGAGG	1440
Qy	1441	ACGTAAACAGACTCGCTCAAACAGATATTGAAGCACCCCTATGGACACAGGCGAGCTTTATCT	1500
Db	1441	ACGTAAACAGACTCGCTCAAACAGATATTGAAGCACCCCTATGGACACAGGCGAGCTTTATCT	1500
Qy	1501	CTGACCCAGAGCTTGCTTTTGGTGGCGAATTTGCTGTGCGCCGAGATGAAGGCCCTTCTTGT	1560
Db	1501	CTGACCCAGAGCTTGCTTTTGGTGGCGAATTTGCTGTGCGCCGAGATGAAGGCCCTTCTTGT	1560
Qy	1561	TTGTCACTCTCGTTCGGGTCAGTTTCAGAGCCCAATCATCTCTCATCCAGAGTACGAGCACA	1620
Db	1561	TTGTCACTCTCGTTCGGGTCAGTTTCAGAGCCCAATCATCTCTCATCCAGAGTACGAGCACA	1620
Qy	1621	TCACCTTTGATCATTTCCCGTCTCGAATCGTTCGGTAGAGAGAGGAGGATCCACAGATGC	1680
Db	1621	TCACCTTTGATCATTTCCCGTCTCGAATCGTTCGGTAGAGAGAGGAGGATCCACAGATGC	1680
Qy	1681	GTTTTCAGGTCGAAGCCGGTCCGAATGAGTTGATTCCTTCATATGTTAAGAGAAGTTCTATAT	1740
Db	1681	GTTTTCAGGTCGAAGCCGGTCCGAATGAGTTGATTCCTTCATATGTTAAGAGAAGTTCTATAT	1740
Qy	1741	CTGAGAAATGTGACTAGGACAATGCGCTTCTTTGGTATCGAATTTGTTTCTCATACCCGGGC	1800
Db	1741	CTGAGAAATGTGACTAGGACAATGCGCTTCTTTGGTATCGAATTTGTTTCTCATACCCGGGC	1800
Qy	1801	AGGCGCTACACTTCACGTCGCTCATCGTCGCTCTGGACTCTCTTCTTACCCTATATAT	1860
Db	1801	AGGCGCTATGACTTCTACGTCGCTCATCGTCGCTCTGGACTCTCTTCTTACCCTATATAT	1860
Qy	1861	TATTTCCATCCGAAAAAATAAAAAAAAAAAAAAAAAAAAAAGCGCGGCTCGAGCCGGCT	1920
Db	1861	TATTTCCATCCGAAAAAATAAAAAAAAAAAAAAAAAAAAAAGCGCGGCTCGAGCCGGCT	1920
Qy	1921	CGTGCCGAATTC	1932
Db	1921	CGTGCCGAATTC	1932

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RESULT 2
US-10-066-007-4
; Sequence 4, Application US/10066007
; Publication No. US20030077691A
; GENERAL INFORMATION:
; APPLICANT: HOSHINO, Tatsuo
; APPLICANT: OIUMA, Kazuyuki
; APPLICANT: SETOGUCHI, Yutaka
; TITLE OF INVENTION: ASTAXANTHIN SYNTHETASE
; FILE REFERENCE: ASTAXANTHIN SYNTHETASE
; CURRENT APPLICATION NUMBER: US/10/066,007
; CURRENT FILING DATE: 2001-02-01
; PRIOR APPLICATION NUMBER: US/09/518,386
; PRIOR FILING DATE: 2000-03-03
; PRIOR APPLICATION NUMBER: EP 99104668.1
; PRIOR FILING DATE: 1999-03-09
; PRIOR APPLICATION NUMBER: EP 00101666.6
; PRIOR FILING DATE: 2000-02-01
; NUMBER OF SEQ ID NOS: 32
; SOFTWARE: Patent In Ver. 2.1
; SEQ ID NO 4
; LENGTH: 3969

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; TYPE: DNA
; ORGANISM: Phaffia rhodozyma
; FEATURE:
; NAME/KEY: 5' UTR
; NAME/KEY: (517)..(518)
; NAME/KEY: intron
; NAME/KEY: (784)..(898)
; NAME/KEY: intron
; NAME/KEY: (1016)..(1087)
; NAME/KEY: intron
; NAME/KEY: (1180)..(1302)
; NAME/KEY: intron
; NAME/KEY: (1518)..(1600)
; NAME/KEY: intron
; NAME/KEY: (1635)..(1723)
; NAME/KEY: intron
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; NAME/KEY: intron
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; NAME/KEY: intron
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; NAME/KEY: (2653)..(2742)
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; NAME/KEY: (3322)..(3398)
; NAME/KEY: intron
; NAME/KEY: (3424)..(3513)
; NAME/KEY: polyA site
; NAME/KEY: (3865)..(3866)
; NAME/KEY: intron
; NAME/KEY: (653)..(734)
; LOCATION:
US-10-066-007-4

Query Match      18.3%; Score 353.2; DB 5; Length 3969;
Best Local Similarity 99.2%; Pred. No. 6e-97;
Matches 355; Conservative 0; Mismatches 3; Indels 0; Gaps 0;

QY 1514 TTGCTTTGGTTCGCGATTTGCTGCGCGAGATGAAGGCTTCTTTGTTGTCACTCTCCG 1573
      |||
DB 3508 TCGCAGTGTGGCGATTTGCTGCGCGAGATGAAGGCTTCTTTGTTGTCACTCTCCG 3567

QY 1574 TCGGGTCCAGTTTCGAGCCCATCATCTCTCATCCAGATACGACATCATCCTTGATCAT 1633
      |||
DB 3568 TCGGGTCCAGTTTCGAGCCCATCATCTCTCATCCAGATACGACATCATCCTTGATCAT 3627

QY 1634 TTCCCGTCTCGAATCGTTGGTAGAGAGAGAGGGGTACCGATCGGTTTCAGGTCAA 1693
      |||
DB 3628 TTCCCGTCTCGAATCGTTGGTAGAGAGAGAGGGGTACCGATCGGTTTCAGGTCAA 3687

QY 1694 GCGGGTCGAATCAGTTGATTTCTCATATGTTAAGAGAGTTCATATCTGAGAAATGTGTG 1753
      |||
DB 3688 GCGGGTCGAATCAGTTGATTTCTCATATGTTAAGAGAGTTCATATCTGAGAAATGTGTG 3747

QY 1754 ACTAGGACAAATGCCTTTCTTTGATCGAATTTGTTCTCATACCCGGCAGCGCTATGACT 1813
      |||
DB 3748 ACTAGGACAAATGCCTTTCTTTGATCGAATTTGTTCTCATACCCGGCAGCGCTATGACT 3807

QY 1814 TCTACGCTGTCTATCGTCTGACTCTCTCTTCTTACCCCTATATATTTCCATCCG 1871
      |||
DB 3808 TCTACGCTGTCTATCGTCTGACTCTCTTCTTACCCCTATATATTTCCATCCG 3865

RESULT 3

US-10-739-930-3162
; Sequence 3162, Application US/10739930
; Publication No. US20040216190A1
; GENERAL INFORMATION:
; APPLICANT: Kovalic, David K.
; TITLE OF INVENTION: NUCLEIC ACID MOLECULES AND OTHER MOLECULES ASSOCIATED WITH
; TITLE OF INVENTION: PLANTS AND USES THEREOF FOR PLANT IMPROVEMENT
; FILE REFERENCE: 38-21(53377)B
; CURRENT APPLICATION NUMBER: US/10/739,930
; CURRENT FILING DATE: 2003-12-18
; NUMBER OF SEQ ID NOS: 11088
; SEQ ID NO 3162
; LENGTH: 702
; TYPE: DNA
; ORGANISM: Glycine max
; FEATURE:
; OTHER INFORMATION: Clone ID: GLYMA-23APR03-CLUSTER13983_3
US-10-739-930-3162

Query Match      2.7%; Score 51.8; DB 8; Length 702;
Best Local Similarity 68.9%; Pred. No. 0.00016;
Matches 71; Conservative 0; Mismatches 32; Indels 0; Gaps 0;

QY 1812 CTTCTACGTCGTCTATCGTCTGCTCTGACTCTCTTTTACCCCTATATATTTCCATCCG 1871
      |||
DB 592 CATCTATGTTTGTGTAATGCTATGCCCGCATATATATATATATATATATGTTAGTCCAG 651

QY 1872 AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAGCGCGCTCGAG 1914
      |||
DB 652 CAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAGCGCGCTCTAG 694

RESULT 4

US-10-425-115-54628/c
; Sequence 54628, Application US/10425115
; Publication No. US20040214272A1
; GENERAL INFORMATION:
; APPLICANT: La Rosa, Thomas J.
; APPLICANT: Kovalic, David K.
; APPLICANT: Zhou, Yihua
; APPLICANT: Cao, Yongwei
; TITLE OF INVENTION: Nucleic Acid Molecules and Other Molecules Associated With
; TITLE OF INVENTION: Plants
; FILE REFERENCE: 38-21(53222)B
; CURRENT APPLICATION NUMBER: US/10/425,115
; CURRENT FILING DATE: 2003-04-28
; NUMBER OF SEQ ID NOS: 369326
; SEQ ID NO 54628
; LENGTH: 333
; TYPE: DNA
; ORGANISM: Zea mays
; FEATURE:
; OTHER INFORMATION: Clone ID: MFT4577_149820C.1
US-10-425-115-54628

Query Match      2.6%; Score 49.8; DB 8; Length 333;
Best Local Similarity 74.1%; Pred. No. 0.00044;
Matches 63; Conservative 0; Mismatches 22; Indels 0; Gaps 0;

QY 1824 CTATCGTCGCTCTGACTCTCTTTTACCCCTATATATTTCCATCCGAAAAAAAAAAAA 1883
      |||
DB 98 CTCGTGTGTTCTGCTCTTTTCTCAGATAAATATTTGCGCTATCCAAAAAAAAAAAAAA 39

QY 1884 AAAAAAAAAAAAAAAAAAGCGCGCG 1908
      |||
DB 38 AAAAAAAAAAAAAAAAAAGCGCGCG 14

RESULT 5

US-10-424-599-20949
; Sequence 20949, Application US/10424599
; Publication No. US20040031072A1
; GENERAL INFORMATION:
```

```
; APPLICANT: La Rosa Thomas J
; APPLICANT: Kovalic David K
; APPLICANT: Zhou Yihua
; APPLICANT: Cao Yongwei
; TITLE OF INVENTION: Soy Nucleic Acid Molecules and Other Molecules Associated With
; FILE REFERENCE: 38-21(53223)B
; CURRENT APPLICATION NUMBER: US/10/424,599
; CURRENT FILING DATE: 2003-04-28
; NUMBER OF SEQ ID NOS: 285684
; SEQ ID NO 20949
; LENGTH: 467
; TYPE: DNA
; ORGANISM: Glycine max
; FEATURE:
; OTHER INFORMATION: Clone ID: PAT_MRT3847_118922C.1
US-10-424-599-20949

Query Match      2.6%; Score 49.8; DB 7; Length 467;
Best Local Similarity 96.2%; Pred. No. 0.00053;
Matches 51; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

Qy 1861 TATTCATCCGAGAAAAAAGGCGCGCTCGA 1913
      |||||
Db 401 TATTCATCCAAAAAAGGCGCGCTCGA 453

RESULT 6
US-10-264-237-392
; Sequence 392, Application US/10264237
; Publication No. US2004000949A1
; GENERAL INFORMATION:
; APPLICANT: Birse et al.
; TITLE OF INVENTION: Nucleic Acids, Proteins, and Antibodies
; FILE REFERENCE: PA131P1
; CURRENT APPLICATION NUMBER: US/10/264,237
; CURRENT FILING DATE: 2002-10-04
; PRIOR APPLICATION NUMBER: PCT/US01/16450
; PRIOR FILING DATE: 2001-05-18
; PRIOR APPLICATION NUMBER: US 60/205,515
; PRIOR FILING DATE: 2000-05-19
; NUMBER OF SEQ ID NOS: 2876
; SOFTWARE: PatentIn Ver. 3.1
; SEQ ID NO 392
; LENGTH: 1501
; TYPE: DNA
; ORGANISM: Homo sapiens
; FEATURE:
; NAME/KEY: misc feature
; LOCATION: (7)-(7)
; OTHER INFORMATION: n equals a,t,g, or c
US-10-264-237-392
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Query Match      2.6%; Score 49.4; DB 6; Length 1501;
Best Local Similarity 63.2%; Pred. No. 0.0014;
Matches 74; Conservative 1; Mismatches 42; Indels 0; Gaps 0;

Qy 1785 TTCTCATACCGGCGAGGCTATGACTTCTAGTCTGCTATGCTGCTGCTGCTGCTC 1844
      |||||
Db 1370 TTTTCTTGTGCTTGTCTTTTGTGTCAGAGCTGCATGATGTCAGCGCTTGACTATC 1429

Qy 1845 TTCTTACCTTATATTTCCATCCGAAAAAAGGCGCGCTCGAG 1901
      |||||
Db 1430 TTTTGAATAAGATTGATTTTAAACAAAAAAGGCGCGCTCTAG 1486
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```
RESULT 7
US-10-424-599-1793
; Sequence 1793, Application US/10424599
; Publication No. US20040031072A1
; GENERAL INFORMATION:
; APPLICANT: La Rosa Thomas J
; APPLICANT: Kovalic David K
```

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; APPLICANT: Zhou Yihua
; APPLICANT: Cao Yongwei
; TITLE OF INVENTION: Soy Nucleic Acid Molecules and Other Molecules Associated With
; FILE REFERENCE: 38-21(53223)B
; CURRENT APPLICATION NUMBER: US/10/424,599
; CURRENT FILING DATE: 2003-04-28
; NUMBER OF SEQ ID NOS: 285684
; SEQ ID NO 1793
; LENGTH: 368
; TYPE: DNA
; ORGANISM: Glycine max
; FEATURE:
; OTHER INFORMATION: Clone ID: PAT_MRT3847_101618C.1
US-10-424-599-1793

Query Match      2.5%; Score 49.2; DB 7; Length 368;
Best Local Similarity 87.1%; Pred. No. 0.00071;
Matches 54; Conservative 0; Mismatches 8; Indels 0; Gaps 0;

Qy 1853 CTATATATTTCCATCCGAAAAAAGGCGCGCTCG 1912
      |||||
Db 299 CAATAGATCTTCATACCGAAAAAAGGCGCGCTCT 358

Qy 1913 AG 1914
      ||
Db 359 AG 360

RESULT 8
US-10-424-599-25496/c
; Sequence 25496, Application US/10424599
; Publication No. US20040031072A1
; GENERAL INFORMATION:
; APPLICANT: La Rosa Thomas J
; APPLICANT: Kovalic David K
; APPLICANT: Zhou Yihua
; APPLICANT: Cao Yongwei
; TITLE OF INVENTION: Soy Nucleic Acid Molecules and Other Molecules Associated With
; FILE REFERENCE: 38-21(53223)B
; CURRENT APPLICATION NUMBER: US/10/424,599
; CURRENT FILING DATE: 2003-04-28
; NUMBER OF SEQ ID NOS: 285684
; SEQ ID NO 25496
; LENGTH: 657
; TYPE: DNA
; ORGANISM: Glycine max
; FEATURE:
; OTHER INFORMATION: Clone ID: PAT_MRT3847_123024C.1
US-10-424-599-25496
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Query Match      2.5%; Score 48.4; DB 7; Length 657;
Best Local Similarity 74.4%; Pred. No. 0.0017;
Matches 61; Conservative 0; Mismatches 21; Indels 0; Gaps 0;

Qy 1833 CTCTGACTCTCTTCTTACCCTATATATTTCCATCCGAAAAAAGGCGCGCTCG 1892
      |||||
Db 91 CTCTCGAGATTTCTCGAAAAACGATTCAGATGAAGAGCAAAAAAAGGCGCGCTCT 32

Qy 1893 AAAAAAAGGCGCGCTCGAG 1914
      |||||
Db 31 AAAAAAAGGCGCGCTCTAG 10
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```
RESULT 9
US-10-690-991-1
; Sequence 1, Application US/10690991
; Publication No. US2004024319A1
; GENERAL INFORMATION:
; APPLICANT: Tickie, Ian J
; APPLICANT: Vonthein, Clemens
; APPLICANT: Williams, Pamela A
```

APPLICANT: Jhoti, Harren
APPLICANT: Kirtan, Stewart Brian
TITLE OF INVENTION: Crystal structure of cytochrome P450
FILE REFERENCE: 620-282
CURRENT APPLICATION NUMBER: US/10/690,991
CURRENT FILING DATE: 2004-04-13
PRIOR APPLICATION NUMBER: US 60/421,063
PRIOR FILING DATE: 2002-10-25
PRIOR APPLICATION NUMBER: PCT/GB02/02668
PRIOR FILING DATE: 2002-05-30
PRIOR APPLICATION NUMBER: US 10/221,036
PRIOR FILING DATE: 2002-04-02
PRIOR APPLICATION NUMBER: US 60/479,448
PRIOR FILING DATE: 2003-06-19
NUMBER OF SEQ ID NOS: 6
SOFTWARE: PatentIn version 3.1
SEQ ID NO 1

LENGTH: 1458

TYPE: DNA

ORGANISM: Artificial sequence

FEATURE:

OTHER INFORMATION: Codes for SEQ ID NO: 2, a human 3A4 P450 protein truncated in its N-terminal region to delete the hydrophobic trans-membrane

OTHER INFORMATION: domain, and the region replaced by a short N-terminal sequence.

US-10-690-991-1

Query Match 2.5%; Score 48.4; DB 8; Length 1458;

Best Local Similarity 50.7%; Pred. No. 0.0028;

Matches 146; Conservative 0; Mismatches 136; Indels 6; Gaps 1;

QY 997 AAAGCTGTCGATGAGGAGTACTCGCTCAGATCAGTAACCTGTTATTTCTCGATATG 1056

DB 797 AAGCTCTGTCGATGAGGAGTACTCGCTCAGATCAGTAACCTGTTATTTCTCGATATG 856

QY 1057 AAACCTTCTTCGACAGTCTTGACATGAGTGTTCACCGACTCTCAGAGACAAAGCCGTTTC 1116

DB 857 AAACACAGCAGAGTGTCTCTCTTCATATGATGTAAGTGGCCACTCACCTCATGTGCC 916

QY 1117 AGGATAAACTTCGAGAGAAATTTGTTCAGATCGACACGGATATGCTTACGCTAGACGNAAC 1176

DB 917 AGCAGAACTGCAGGAGGAAATTTGATGAGTGTTCACCAATTAAGCCACCCACCTATG 976

QY 1177 TTAATGCGTTGC-----CTTATCTCGAAGCGTTTGTAAAGGAGTCTCTTCTGTAGACC 1230

DB 977 ATACTGTCTACAGATGAGTATCTTGACATGGTGGTGAATGAACGCTCAGATTATTCC 1036

QY 1231 CTCCTAGTCCGATGATCTTAACCGTGAATGCTTAAAGGATGAAGACTTCA 1278

DB 1037 CAATGCTATGAGACTTGAGGGGTCTGCNAAAAGATGTTGAGATCA 1084

RESULT 10

US-10-833-296-1

Sequence 1, Application US/10833296

Publication No. US20050032119A1

GENERAL INFORMATION:

APPLICANT: Tickler, Ian J

APPLICANT: Vonrhein, Clemens

APPLICANT: Vinkovic, Dijana M

APPLICANT: Kirtan, Stewart

APPLICANT: Williams, Pamela A

APPLICANT: Jhoti, Harren

TITLE OF INVENTION: Crystal Structure of Cytochrome P450

FILE REFERENCE: 620-305

CURRENT APPLICATION NUMBER: US/10/833,296

CURRENT FILING DATE: 2004-04-28

PRIOR APPLICATION NUMBER: GB 0108214.8

PRIOR FILING DATE: 2001-04-02

PRIOR APPLICATION NUMBER: GB 0108212.2

PRIOR FILING DATE: 2001-04-02

PRIOR APPLICATION NUMBER: US 60/479,448

PRIOR FILING DATE: 2003-06-19

PRIOR APPLICATION NUMBER: US 60/421,063

PRIOR FILING DATE: 2002-10-25
PRIOR APPLICATION NUMBER: US 60/306,873
PRIOR FILING DATE: 2001-07-23
PRIOR APPLICATION NUMBER: US 60/306,874
PRIOR FILING DATE: 2001-07-23
PRIOR APPLICATION NUMBER: US 10/690,991
PRIOR FILING DATE: 2003-10-23
PRIOR APPLICATION NUMBER: US 10/221,036
PRIOR FILING DATE: 2002-04-02
PRIOR APPLICATION NUMBER: PCT/GB02/02668
PRIOR FILING DATE: 2002-05-30
NUMBER OF SEQ ID NOS: 6
SOFTWARE: PatentIn version 3.1
SEQ ID NO 1

LENGTH: 1458

TYPE: DNA

ORGANISM: Artificial sequence

FEATURE:

OTHER INFORMATION: Codes for SEQ ID NO: 2, a human 3A4 P450 protein truncated in its N-terminal region to delete the hydrophobic trans-membrane

OTHER INFORMATION: domain, and the region replaced by a short N-terminal sequence.

US-10-833-296-1

Query Match 2.5%; Score 48.4; DB 8; Length 1458;

Best Local Similarity 50.7%; Pred. No. 0.0028;

Matches 146; Conservative 0; Mismatches 136; Indels 6; Gaps 1;

QY 997 AAAGCTGTCGATGAGGAGTACTCGCTCAGATCAGTAACCTGTTATTTCTCGATATG 1056

DB 797 AAGCTCTGTCGATGAGGAGTACTCGCTCAGATCAGTAACCTGTTATTTCTCGATATG 856

QY 1057 AAACCTTCTTCGACAGTCTTGACATGAGTGTTCACCGACTCTCAGAGACAAAGCCGTTTC 1116

DB 857 AAACACAGCAGAGTGTCTCTCTTCATATGATGTAAGTGGCCACTCACCTCATGTGCC 916

QY 1117 AGGATAAACTTCGAGAGAAATTTGTTCAGATCGACACGGATATGCTTACGCTAGACGNAAC 1176

DB 917 AGCAGAACTGCAGGAGGAAATTTGATGAGTGTTCACCAATTAAGCCACCCACCTATG 976

QY 1177 TTAATGCGTTGC-----CTTATCTCGAAGCGTTTGTAAAGGAGTCTCTTCTGTAGACC 1230

DB 977 ATACTGTCTACAGATGAGTATCTTGACATGGTGGTGAATGAACGCTCAGATTATTCC 1036

QY 1231 CTCCTAGTCCGATGATCTTAACCGTGAATGCTTAAAGGATGAAGACTTCA 1278

DB 1037 CAATGCTATGAGACTTGAGGGGTCTGCNAAAAGATGTTGAGATCA 1084

RESULT 11

US-10-516-338-7

Sequence 7, Application US/10516338

Publication No. US2005016434A1

GENERAL INFORMATION:

APPLICANT: Astex Technology Limited

APPLICANT: Cosme, Jose

APPLICANT: Ward, Alison

APPLICANT: Vuillard, Laurent

APPLICANT: Williams, Pamela

APPLICANT: Hamilton, Bruce

TITLE OF INVENTION: Methods of Purification of Cytochrome P450 Proteins

FILE REFERENCE: AHB06047252

CURRENT APPLICATION NUMBER: US/10/516,338

CURRENT FILING DATE: 2004-11-30

NUMBER OF SEQ ID NOS: 84

SOFTWARE: PatentIn Ver. 2.1

SEQ ID NO 7

LENGTH: 1458

TYPE: DNA

ORGANISM: Artificial Sequence

FEATURE:

OTHER INFORMATION: Description of Artificial Sequence: 3A4

US-10-516-338-7

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Query Match          2.5%; Score 48.4; DB 9; Length 1458;
Best Local Similarity 50.7%; Pred. No. 0.0028;
Matches 146; Conservative 0; Mismatches 136; Indels 6; Gaps 1;

QY 997 AAAAGTGTCCGATGAGGAGTACTCGCTCAGATCAGTAACCTGTTATTGCTGGATATG 1056
D 997 AAGCTGTGTCGATCTGGAGCTCGTGCCCAATCAATATCTTTATTGCTGGCTATG 856
QY 1057 AAACCTTCTCGACAGTCTTGACATGGATGTTTACCGACTCTCAGAACAAAGCGGTT 1116
D 857 AAACCAAGAGAGTGTCTCTCTCTCAATATGATGAACTGGCCACTCACCTGATGTC 916
QY 1117 AGGATAAACTTCGAGAGAAATTTGTGACATCGACACGGATATGCTACGCTAGACGAC 1176
D 917 AGCAGAACTCGAGAGGAAATGATGCGATTTTACCNAATAGGCACACCCACCTATG 976
QY 1177 TTAATGCGTTGC-----CTTATCTCGAAGCGTTTCTTAAGGAGTCTCTTCTGCTAGACC 1230
D 977 ATACTGTGTACAGATGGAGTATCTTGACATGGTGTGAATGAACGCTCAGATTATTCC 1036
QY 1231 CTCCTAGTCCGTATGCTAACCGTGAATGCTTAAAGGATGAAGACTTCA 1278
D 1037 CAATTGCTATGAGACTTGAAGGGTCTGCAAAAAAAGATGTTGAGATCA 1084

RESULT 12
US-11-076-967-1
; Sequence 1, Application US/11076967
; Publication No. US2005015901A1
; GENERAL INFORMATION:
; APPLICANT: Tickie, Ian J
; APPLICANT: Vonrhein, Clemens
; APPLICANT: Williams, Pamela A
; APPLICANT: Jhoti, Harren
; APPLICANT: Kirtan, Stewart Brian
; TITLE OF INVENTION: Crystal structure of cytochrome P450
; FILE REFERENCE: 620-282
; CURRENT APPLICATION NUMBER: US/11/076.967
; CURRENT FILING DATE: 2005-03-11
; PRIOR APPLICATION NUMBER: US/10/690,991
; PRIOR FILING DATE: 2003-10-23
; PRIOR APPLICATION NUMBER: US 60/421,063
; PRIOR FILING DATE: 2002-10-25
; PRIOR APPLICATION NUMBER: PCT/GB02/02668
; PRIOR FILING DATE: 2002-05-30
; PRIOR APPLICATION NUMBER: US 10/221,036
; PRIOR FILING DATE: 2002-04-02
; PRIOR APPLICATION NUMBER: US 60/479,448
; PRIOR FILING DATE: 2003-06-19
; NUMBER OF SEQ ID NOS: 6
; SOFTWARE: Patentin version 3.1
; SEQ ID NO 1
; LENGTH: 1458
; TYPE: DNA
; ORGANISM: Artificial sequence
; FEATURE:
; OTHER INFORMATION: Codes for SEQ ID NO: 2, a human 3A4 P450 protein truncated in its
; OTHER INFORMATION: N-terminal region to delete the hydrophobic trans-membrane
; OTHER INFORMATION: domain, and the region replaced by a short N-terminal sequence.
US-11-076-967-1

Query Match          2.5%; Score 48.4; DB 10; Length 1458;
Best Local Similarity 50.7%; Pred. No. 0.0028;
Matches 146; Conservative 0; Mismatches 136; Indels 6; Gaps 1;

QY 997 AAAAGTGTCCGATGAGGAGTACTCGCTCAGATCAGTAACCTGTTATTGCTGGATATG 1056
D 997 AAGCTGTGTCGATCTGGAGCTCGTGCCCAATCAATATCTTTATTGCTGGCTATG 856
QY 1057 AAACCTTCTCGACAGTCTTGACATGGATGTTTACCGACTCTCAGAACAAAGCGGTT 1116
D 857 AAACCAAGAGAGTGTCTCTCTCTCAATATGATGAACTGGCCACTCACCTGATGTC 916

RESULT 13
US-10-313-963A-55
; Sequence 55, Application US/10313963A
; Publication No. US20040002078A1
; GENERAL INFORMATION:
; APPLICANT: Boutell, Jonathan
; APPLICANT: Godber, Benjamin
; APPLICANT: Hart, Darren
; APPLICANT: Blackburn, Jonathan
; TITLE OF INVENTION: Arrays
; FILE REFERENCE: KIL-001
; CURRENT APPLICATION NUMBER: US/10/313,963A
; CURRENT FILING DATE: 2003-06-19
; PRIOR APPLICATION NUMBER: US 60/335,806
; PRIOR FILING DATE: 2001-12-05
; PRIOR APPLICATION NUMBER: US 60/410,815
; PRIOR FILING DATE: 2002-09-16
; NUMBER OF SEQ ID NOS: 60
; SOFTWARE: Patentin version 3.1
; SEQ ID NO 55
; LENGTH: 1512
; TYPE: DNA
; ORGANISM: Homo Sapiens
US-10-313-963A-55

Query Match          2.5%; Score 48.4; DB 6; Length 1512;
Best Local Similarity 50.7%; Pred. No. 0.0028;
Matches 146; Conservative 0; Mismatches 136; Indels 6; Gaps 1;

QY 997 AAAAGCTGTCCGATGAGGAGTACTCGCTCAGATCAGTAACCTGTTATTGCTGGATATG 1056
D 863 AAGCTGTGTCGATCTGGAGCTCGTGCCCAATCAATATCTTTATTGCTGGCTATG 922
QY 1057 AAACCTTCTTCGACAGTCTTGACATGGATGTTTACCGACTCTCAGAACAAAGCGGTT 1116
D 923 AAACCAAGAGAGTGTCTCTCTCTCTTATGATGAACTGGCCACTCACCTGATGTC 982
QY 1117 AGGATAAACTTCGAGAGAAATTTGTGACATCGACACGGATATGCTTACGCTAGACGAA 1176
D 983 AGCAGAACTCGAGAGGAAATTTGATGCAAGTTTATCCCAATTAAGGCACACCCACCTATG 1042
QY 1177 TTAATGCGTTGC-----CTTATCTCGAAGCGTTTGTAAAGGAGTCTCTTCTGCTAGACC 1230
D 1043 ATACTGTGTACAGATGGAGTATCTTGACATGGTGTGAATGAACGCTCAGATTATTCC 1102
QY 1231 CTCCTAGTCCGTATGCTTAAACCGTGAATGCTTAAAGGATGAAGACTTCA 1278
D 1103 CAATTGCTATGAGACTTGAAGGGTCTGCAAAAAAAGATGTTGAGATCA 1150

RESULT 14
US-10-745-237-407
; Sequence 407, Application US/10745237
; Publication No. US20050227301A1
; GENERAL INFORMATION:
; APPLICANT: Cyclacel Limited
; APPLICANT: Glover, David
; APPLICANT: Bell, Graham
; APPLICANT: Frenz, Lisa
; APPLICANT: Midgley, Carol
```

; TITLE OF INVENTION: Cell Cycle Progression Proteins

; FILE REFERENCE: P015819WO CYK

; CURRENT APPLICATION NUMBER: US/10/745,237

; CURRENT FILING DATE: 2003-12-23

; PRIOR APPLICATION NUMBER: US 60/439,123

; PRIOR FILING DATE: 2003-01-10

; PRIOR APPLICATION NUMBER: US 60/468,402

; PRIOR FILING DATE: 2003-05-06

; NUMBER OF SEQ ID NOS: 600

; SOFTWARE: PatentIn version 3.1

; SEQ ID NO 407

; LENGTH: 1512

; TYPE: DNA

; ORGANISM: Homo sapiens

; FEATURE:

; OTHER INFORMATION: M18907

US-10-745-237-407

Query Match 2.5%; Score 48.4; DB 9; Length 1512;

Best Local Similarity 50.7%; Pred. No. 0.0028; Mismatches 136; Indels 6; Gaps 1;

Matches 146; Conservative 0;

Qy 997 AAAAGCTGCTCCGATGAGGAGGTACTCGCTCAGATCAGTAACCTGTTATTGCTGGATATG 1056

Db 863 AAGCTCTGTCGATCTGGAGCTCGTGGCCCAATCAATTATCTTTATTTGCTGGCTATG 922

Qy 1057 AAATCTTTCGACAGTCTTTGACATGGATGTTTCAACCGACTCTCAGAGACAAAGCCGTTT 1116

Db 923 AAACACGAGCAGTGTCTCTCTCTTCAATTATGTATGAACTGGCCCACTCACCTGATGTCC 982

Qy 1117 AGGATAAACTTCGAGAAGAAATTTGTCAGATCGACACGGATATGCTTCTCGTCTAGACC 1230

Db 983 AGCAGAAACTCGAGGAGAAATTTGATGCACTTTTACCCAAATAAGGCACACCCACCTATG 1042

Qy 1177 TTAATGCGTTGC-----CTTATCTCGAAGCGTTTGTAAAGGAGTCTCTTCTGCTAGACC 1230

Db 1043 ATACTGTCTACAGATGGAGTATCTTGACATGGTGTGATGAACGCTCAGATTATTCC 1102

Qy 1231 CTCCTAGTCCGTATGCTTAACCGTGAATGCTTTAAAGGATGAAGACTTCA 1278

Db 1103 CAATTGCTATGAGACTTTGAGAGGGTCTGCAAAAAAGATGTTGAGATCA 1150

RESULT 15

US-09-880-107-1586

; Sequence 1586, Application US/09880107

; Patent No. US20020142981A1

; GENERAL INFORMATION:

; APPLICANT: Horne, Darci T.

; APPLICANT: Vockley, Joseph G.

; APPLICANT: Scherf, Uwe

; APPLICANT: Gene Logic, Inc.

; TITLE OF INVENTION: Gene Expression Profiles in Liver Cancer

; CURRENT APPLICATION NUMBER: US/09/880,107

; CURRENT FILING DATE: 2001-06-14

; PRIOR APPLICATION NUMBER: US 60/211,379

; PRIOR FILING DATE: 2000-06-14

; PRIOR APPLICATION NUMBER: US 60/237,054

; PRIOR FILING DATE: 2000-10-02

; NUMBER OF SEQ ID NOS: 3950

; SOFTWARE: PatentIn Ver. 2.1

; SEQ ID NO 1586

; LENGTH: 2011

; TYPE: DNA

; ORGANISM: Homo sapiens

; FEATURE:

; OTHER INFORMATION: Genbank Accession No. US20020142981A1 D00003

US-09-880-107-1586

Query Match 2.5%; Score 48.4; DB 3; Length 2011;

Best Local Similarity 50.7%; Pred. No. 0.0033;

Matches 146; Conservative 0; Mismatches 136; Indels 6; Gaps 1;

Qy 997 AAAAGCTGCTCCGATGAGGAGGTACTCGCTCAGATCAGTAACCTGTTATTGCTGGATATG 1056

Db 926 AAGCTCTGTCGATCTGGAGCTCGTGGCCCAATCAATTATCTTTATTTGCTGGCTATG 985

Qy 1057 AAATCTTTCGACAGTCTTTGACATGGATGTTTCAACCGACTCTCAGAGACAAAGCCGTTT 1116

Db 986 AAACACGAGCAGTGTCTCTCTCTTCAATTATGTATGAACTGGCCCACTCACCTGATGTCC 1045

Qy 1117 AGGATAAACTTCGAGAAGAAATTTGTCAGATCGACACGGATATGCTTCTCGTCTAGACC 1176

Db 1046 AGCAGAAACTCGAGGAGAAATTTGATGCACTTTTACCCAAATAAGGCACACCCACCTATG 1105

Qy 1177 TTAATGCGTTGC-----CTTATCTCGAAGCGTTTGTAAAGGAGTCTCTTCTGCTAGACC 1230

Db 1106 ATACTGTCTACAGATGGAGTATCTTGACATGGTGTGATGAACGCTCAGATTATTCC 1165

Qy 1231 CTCCTAGTCCGTATGCTTAACCGTGAATGCTTTAAAGGATGAAGACTTCA 1278

Db 1166 CAATTGCTATGAGACTTTGAGAGGGTCTGCAAAAAAGATGTTGAGATCA 1213

Search completed: November 21, 2005, 07:27:48

Job time : 1093 secs

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OM nucleic - nucleic search, using sw model

Run on: November 21, 2005, 02:44:22 ; Search time 261 Seconds

(without alignments)
13158.043 Million cell updates/sec

Title: US-10-066-007A-2

Perfect score: 1932
Sequence: 1 gaattcgccagcaggccacc.....agccgctgctgcgaattc 1932

Scoring table: IDENTITY NUC

Gapop 10.0 , Gapext 1.0

Searched: 1303057 seqs, 888780828 residues

Total number of hits satisfying chosen parameters: 2606114

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%

Maximum Match 100%

Listing first 45 summaries

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3: /cgn2_6/ptodata/1/ina/6A-COMB.seq:*

4: /cgn2_6/ptodata/1/ina/6B-COMB.seq:*

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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	ID	Description
1	1932	100.0	1932	3	US-09-518-386B-2
2	353.2	18.3	3969	3	US-09-518-386B-4
3	48.4	2.5	1512	3	US-08-277-031B-4
4	48.4	2.5	2059	3	US-09-023-655-1062
5	48.4	2.5	2759	3	US-09-949-016-2691
6	48.4	2.5	2759	3	US-09-144-367-1
7	48.4	2.5	2768	3	US-09-949-016-1221
8	47.4	2.5	2160	3	US-09-716-129-12
9	46.8	2.4	1712	3	US-09-148-545-106
10	46.8	2.4	1712	3	US-09-621-011-106
11	46.8	2.4	1822	3	US-09-148-545-105
12	46.8	2.4	1822	3	US-09-621-011-105
13	45.2	2.3	2080	3	US-09-949-016-2690
14	45	2.3	1831	3	US-08-948-564-15
15	44.8	2.3	1801	3	US-09-709-103-3
16	44.8	2.3	1801	3	US-09-439-410A-3
17	44	2.3	3828	3	US-09-221-013A-7
18	43.6	2.3	352	3	US-09-144-367-8
19	43.6	2.3	31197	3	US-09-949-016-12963
20	43.6	2.3	103934	3	US-09-949-016-14433
21	42.8	2.2	1333	3	US-09-372-422A-9
22	42.8	2.2	2407	3	US-09-370-807-7
23	42.8	2.2	2407	3	US-09-521-259-7
24	42.6	2.2	84252	3	US-09-949-016-17315

25	42.6	2.2	246240	2	US-08-724-394A-20	Sequence 20, Appl
26	42.6	2.2	246240	2	US-08-724-394A-21	Sequence 21, Appl
27	42.6	2.2	246240	2	US-08-724-394A-22	Sequence 22, Appl
c 28	42.4	2.2	396	3	US-09-840-173-19	Sequence 19, Appl
c 29	42.4	2.2	396	3	US-09-713-550-19	Sequence 19, Appl
c 30	42.4	2.2	396	3	US-09-825-294-19	Sequence 19, Appl
c 31	42.4	2.2	396	3	US-09-970-966-19	Sequence 19, Appl
c 32	42.4	2.2	10980	3	US-09-949-016-14471	Sequence 14471, A
c 33	42.4	2.2	15584	3	US-09-949-016-12783	Sequence 12783, A
c 34	42.2	2.2	47	2	US-08-778-494B-114	Sequence 114, App
c 35	42.2	2.2	323	3	US-09-621-976-10374	Sequence 10374, A
c 36	42.2	2.2	323	3	US-10-088-092A-14	Sequence 14, Appl
c 37	41.6	2.2	883	3	US-09-396-149-3	Sequence 3, Appl
c 38	41.6	2.2	2691	3	US-10-101-464A-837	Sequence 837, App
c 39	41.6	2.2	41895	3	US-09-949-016-15135	Sequence 15135, A
c 40	41.6	2.2	199945	3	US-09-949-016-15436	Sequence 15436, A
c 41	41.4	2.1	1126	3	US-09-389-956-7	Sequence 7, Appl
c 42	41.4	2.1	1507	3	US-09-453-323-1	Sequence 1, Appl
c 43	41.4	2.1	2059	3	US-09-949-016-5390	Sequence 5390, Ap
c 44	41.4	2.1	7218	2	US-08-232-463-14	Sequence 14, Appl
c 45	41.2	2.1	824	3	US-10-144-929-29	Sequence 29, Appl

ALIGNMENTS

RESULT 1

US-09-518-386B-2
; Sequence 2, Application US/09518386B
; Patent No. 6365386
; GENERAL INFORMATION:
; APPLICANT: HOSHINO, Tateuo
; APPLICANT: OIUMA, Kazuyuki
; APPLICANT: SETOGUCHI, Yutaka
; TITLE OF INVENTION: ASTAXANTHIN SYNTHETASE
; FILE REFERENCE: ASTAXANTHIN SYNTHETASE
; CURRENT APPLICATION NUMBER: US/09/518,386B
; CURRENT FILING DATE: 2000-03-03
; PRIOR APPLICATION NUMBER: EP 99104668.1
; PRIOR FILING DATE: 1999-03-09
; PRIOR APPLICATION NUMBER: EP 00101666.6
; PRIOR FILING DATE: 2000-02-01
; NUMBER OF SEQ ID NOS: 32
; SOFTWARE: Patentin Ver. 2.1
; SEQ ID NO 2
; LENGTH: 1932
; TYPE: DNA
; ORGANISM: Phaffia rhodozyma
; FEATURE:
; NAME/KEY: CDS
; LOCATION: (33)..(1706)
; NAME/KEY: polyA_site
; LOCATION: (1871)
; NAME/KEY: mRNA
; LOCATION: (14)..(1891)
; US-09-518-386B-2

Query Match 100.0%; Score 1932; DB 3; Length 1932;
Best Local Similarity 100.0%; Pred. No. 0;
Matches 1932; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY	1	GAATTCGGCAGGCGCACCTCTTCTCCATATGTTTCATCTTGCTTGTCTTGTCTCACAGGTG	60
Db	1	GAATTCGGCAGGCGCACCTCTTCTCCATATGTTTCATCTTGCTTGTCTTGTCTCACAGGTG	60
QY	61	CTTTAGGCTCGCTTCTTCTCATGGGCATCCATAGCGTTCTTTCAGTCTTTACCTCGTC	120
Db	61	CTTTAGGCTCGCTTCTTCTCATGGGCATCCATAGCGTTCTTTCAGTCTTTACCTCGTC	120
QY	121	CGAGCGCATCTTCACTGTATTAACCTTTCAGGCGCGAATCATACCACTACTTTACAGCA	180
Db	121	CGAGCGCATCTTCACTGTATTAACCTTTCAGGCGCGAATCATACCACTACTTTACAGCA	180

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QY 181 ATTTTATAGACATCTCTCAGCTCGTACAGTGAAGAGCATGCGAAGTACAGAGAAAT 240
Db 181 ATTTTATAGACATCTCTCAGCTCGTACAGTGAAGAGCATGCGAAGTACAGAGAAAT 240
QY 241 ACGGAAGACACCTCCGGTTTGTGGGATCGTGTGAGCACCCGCTCTTGAATCGACCGATC 300
Db 241 ACGGAAGACACCTCCGGTTTGTGGGATCGTGTGAGCACCCGCTCTTGAATCGACCGATC 300
QY 301 CGAAAGTCTCAACCATGTGATGAAGAAGCCTACGACTATCGAATCTCGAATCTTGATGCGG 360
Db 301 CGAAAGTCTCAACCATGTGATGAAGAAGCCTACGACTATCGAATCTCGAATCTTGATGCGG 360
QY 361 CTCGAGTGTCTCAGAAATGCTACCGGAGATGCTGTGTTACGGCGGAAGGTGAAGCTCAT 420
Db 361 CTCGAGTGTCTCAGAAATGCTACCGGAGATGCTGTGTTACGGCGGAAGGTGAAGCTCAT 420
QY 421 AGCGACATCGAAGGATCATGATCCCCCTCTCTGCTCGCTCAGGCGGTTAAGTCGATGCTC 480
Db 421 AGCGACATCGAAGGATCATGATCCCCCTCTCTGCTCGCTCAGGCGGTTAAGTCGATGCTC 480
QY 481 CAATTTTCTAGAAAAAGGTATGGAATCTGTGCAACAAGATGATGGAGGATGCGGCTGAGA 540
Db 481 CAATTTTCTAGAAAAAGGTATGGAATCTGTGCAACAAGATGATGGAGGATGCGGCTGAGA 540
QY 541 AGGATATGGCGTGGGAGAGTCCGCGGTGCAAAAGAGGCAACAGACTCGAGACCGAAG 600
Db 541 AGGATATGGCGTGGGAGAGTCCGCGGTGCAAAAGAGGCAACAGACTCGAGACCGAAG 600
QY 601 GAGTCGATGTAAGGATGTTGGTTCGCTCGAGCTACTCTGGACGTCATGGCTCTTGCAGGAT 660
Db 601 GAGTCGATGTAAGGATGTTGGTTCGCTCGAGCTACTCTGGACGTCATGGCTCTTGCAGGAT 660
QY 661 TTGACTATAAGAGGACTCCCTCCAGAACAAAGCAATGAGCTCTATGTCGCTTTGTGCG 720
Db 661 TTGACTATAAGAGGACTCCCTCCAGAACAAAGCAATGAGCTCTATGTCGCTTTGTGCG 720
QY 721 GACTTACCGATGGTGTGCTCTTACCTTGGACTCGTTCAAGGCTATCATGTGGGATTTTG 780
Db 721 GACTTACCGATGGTGTGCTCTTACCTTGGACTCGTTCAAGGCTATCATGTGGGATTTTG 780
QY 781 TACCTTTACTTCCGAATCTATGAACCGGAGACATGAGATACCTTTGACTCAAGGATTAGCAG 840
Db 781 TACCTTTACTTCCGAATCTATGAACCGGAGACATGAGATACCTTTGACTCAAGGATTAGCAG 840
QY 841 TTTCCGACGAGTTGGATCGAGCTTATGAGCAAAAGAGCAGCGGCTGTTGGCTCAG 900
Db 841 TTTCCGACGAGTTGGATCGAGCTTATGAGCAAAAGAGCAGCGGCTGTTGGCTCAG 900
QY 901 CTTTCCGATCAGGCTGTGTGATAAAAGGATGTTCAAGGTCGGGATATCCTAAGTCTCCTAG 960
Db 901 CTTTCCGATCAGGCTGTGTGATAAAAGGATGTTCAAGGTCGGGATATCCTAAGTCTCCTAG 960
QY 961 TGAGAGCAAAATCATCGCGGCAACCTGCTGAAATCTCAAAAGCTGTCCGATGAGGAGTAC 1020
Db 961 TGAGAGCAAAATCATCGCGGCAACCTGCTGAAATCTCAAAAGCTGTCCGATGAGGAGTAC 1020
QY 1021 TCGCTCAGATCAGTAACCTGTTATTTGCTGGATATGAAATCTTTCGACAGTCTTGACAT 1080
Db 1021 TCGCTCAGATCAGTAACCTGTTATTTGCTGGATATGAAATCTTTCGACAGTCTTGACAT 1080
QY 1081 GGATGTTTCAACCGACTCTCAGAGACAAAGCCGTTCAGGATAAATTCGAGAGAAATTT 1140
Db 1081 GGATGTTTCAACCGACTCTCAGAGACAAAGCCGTTCAGGATAAATTCGAGAGAAATTT 1140
QY 1141 GTGAGATCGACACGGATATGCTTACGCTAGACACCTTAATGCGTTGCTTATCTCGAAG 1200
Db 1141 GTGAGATCGACACGGATATGCTTACGCTAGACACCTTAATGCGTTGCTTATCTCGAAG 1200
QY 1201 CGTTTGTAAAGGATCTCTTGTCTAGACCCCTCTAGTCCGATGCTAACCGTGAATGCT 1260
Db 1201 CGTTTGTAAAGGATCTCTTGTCTAGACCCCTCTAGTCCGATGCTAACCGTGAATGCT 1260
QY 1261 TAAAGGATGAAGACTTTCATCCCACTTGGCCGAGCCTGTCTTGTGTCGAGATGGGTCGGTCA 1320
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Db 1261 TAAAGGATGAAGACTTTCATCCCACTTGGCCGAGCCTGTCTTGTGTCGAGATGGGTCGGTCA 1320
QY 1321 TCAACGAGTCCGGATCACAAAAGGAACGATGGTCAATGCTTCGGTTGTTCAACATCAATC 1380
Db 1321 TCAACGAGTCCGGATCACAAAAGGAACGATGGTCAATGCTTCGGTTGTTCAACATCAATC 1380
QY 1381 GTTCAAGTTCATTTATGAGAGATGCAAGAAGATTCAGACCGGAGAGGTGGCTTGAGG 1440
Db 1381 GTTCAAGTTCATTTATGAGAGATGCAAGAAGATTCAGACCGGAGAGGTGGCTTGAGG 1440
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Db 1501 CTGGACCCAGAGCTGCTTTGGTGGCGATTTCGTGTCGCCGAGATGAAGGCTTCTTGT 1560
QY 1561 TTGTCACTCTCCGTCCGGTCCAGTTCGAGCCCATCATCTCTCATCCAGAGTACGAGCACA 1620
Db 1561 TTGTCACTCTCCGTCCGGTCCAGTTCGAGCCCATCATCTCTCATCCAGAGTACGAGCACA 1620
QY 1621 TCACCTTGATCATTTCCCGTCTCGAATCGTTGGTAGAGAAAGGAGGTTACAGATGC 1680
Db 1621 TCACCTTGATCATTTCCCGTCTCGAATCGTTGGTAGAGAAAGGAGGTTACAGATGC 1680
QY 1681 GTTTGAGTCAAGCCGTCGAAATGAGTTGATTCCTCATATGTTAAGAAAGTTCTATAT 1740
Db 1681 GTTTGAGTCAAGCCGTCGAAATGAGTTGATTCCTCATATGTTAAGAAAGTTCTATAT 1740
QY 1741 CTGAGAACTGTGACTTAGGACAATGCCCTTCTTTGTATCGATTTGTTCTCATACCCGGC 1800
Db 1741 CTGAGAACTGTGACTTAGGACAATGCCCTTCTTTGTATCGATTTGTTCTCATACCCGGC 1800
QY 1801 AGCGCTATGACTTCTACGCTCTATCGCTCTGCTCTGGAATCTCTTCTTACCTATATAT 1860
Db 1801 AGCGCTATGACTTCTACGCTCTATCGCTCTGCTCTGGAATCTCTTCTTACCTATATAT 1860
QY 1861 TATTCATCCGAAAAAATAAAAAAAAAAAAAAAAAAAAAAAAAAAGCGCGCTCGAGCCGGCT 1920
Db 1861 TATTCATCCGAAAAAATAAAAAAAAAAAAAAAAAAAAAAAAAAAGCGCGCTCGAGCCGGCT 1920
QY 1921 CGTGCCGAATTC 1932
Db 1921 CGTGCCGAATTC 1932
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RESULT 2

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US-09-518-386B-4
; Sequence 4, Application US/09518386B
; Patent No. 6365386
; GENERAL INFORMATION:
; APPLICANT: HOSHINO, Tatsuo
; APPLICANT: OJIMA, Kazuyuki
; APPLICANT: SETOGUCHI, Yutaka
; TITLE OF INVENTION: ASTAXANTHIN SYNTHETASE
; FILE REFERENCE: ASTAXANTHIN SYNTHETASE
; CURRENT APPLICATION NUMBER: US/09/518,386B
; CURRENT FILING DATE: 2000-03-03
; PRIOR APPLICATION NUMBER: EP 99104668.1
; PRIOR FILING DATE: 1999-03-09
; PRIOR APPLICATION NUMBER: EP 00101666.6
; PRIOR FILING DATE: 2000-02-01
; NUMBER OF SEQ ID NOS: 32
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 4
; LENGTH: 3969
; TYPE: DNA
; ORGANISM: Phaffia rhodozyma
; FEATURE:
; NAME/KEY: 5'UTR
; LOCATION: (517)..(518)
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; NAME/KEY: intron
; LOCATION: (784)..(898)
; NAME/KEY: intron
; LOCATION: (1016)..(1087)
; NAME/KEY: intron
; LOCATION: (1180)..(1302)
; NAME/KEY: intron
; LOCATION: (1518)..(1600)
; NAME/KEY: intron
; LOCATION: (1635)..(1723)
; NAME/KEY: intron
; LOCATION: (1867)..(1939)
; NAME/KEY: intron
; LOCATION: (2000)..(2081)
; NAME/KEY: intron
; LOCATION: (2182)..(2257)
; NAME/KEY: intron
; LOCATION: (2355)..(2431)
; NAME/KEY: intron
; LOCATION: (2543)..(2618)
; NAME/KEY: intron
; LOCATION: (2653)..(2742)
; NAME/KEY: intron
; LOCATION: (2815)..(2962)
; NAME/KEY: intron
; LOCATION: (3051)..(3113)
; NAME/KEY: intron
; LOCATION: (3172)..(3247)
; NAME/KEY: intron
; LOCATION: (3322)..(3398)
; NAME/KEY: intron
; LOCATION: (3424)..(3513)
; NAME/KEY: polyA site
; LOCATION: (3865)..(3866)
; NAME/KEY: intron
; LOCATION: (653)..(734)
; LOCATION: 518-386B-4
US-09-518-386B-4
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Query Match      18.3%; Score 353.2; DB 3; Length 3969;
Best Local Similarity 99.2%; Pred. No. 1.3e-96;
Matches 355; Conservative 0; Mismatches 3; Indels 0; Gaps 0;

Qy 1514 TTGCTTTGGTGGCGATTGCTGTCGCGAGATGAAGCCCTTCTGTTTGTCACTCTCCG 1573
Db 3508 TCGCAGTGTGGCGATTGCTGTCGCGAGATGAAGCCCTTCTGTTTGTCACTCTCCG 3567

Qy 1574 TCGGCTCCAGTTCGAGCCCATCATCTCTCATCCAGATACGAGCACATCACCTTGATCAT 1633
Db 3568 TCGGCTCCAGTTCGAGCCCATCATCTCTCATCCAGATACGAGCACATCACCTTGATCAT 3627

Qy 1634 TTCCCGTCTCGAATCGTTGGTGGTGGTGGTGGTGGTGGTGGTGGTGGTGGTGGTGGTGGT 1693
Db 3628 TTCCCGTCTCGAATCGTTGGTGGTGGTGGTGGTGGTGGTGGTGGTGGTGGTGGTGGTGGT 3687

Qy 1694 GCGGTCGAAATCAGTTGATCTTCTATGTTTAAAGAGAGTTCTATATCTGAGAATGTGTG 1753
Db 3698 GCGGTCGAAATCAGTTGATCTTCTATGTTTAAAGAGAGTTCTATATCTGAGAATGTGTG 3747

Qy 1754 ACTAGACAAATCCCTTTCTTTGATCGATTGTTTCTCATACCGGCGAGGCGCTATGACT 1813
Db 3748 ACTAGACAAATCCCTTTCTTTGATCGATTGTTTCTCATACCGGCGAGGCGCTATGACT 3807

Qy 1814 TCTAGTCGTCTATCGTGGCTCTGAGCTCTCTTCTTACCTATATATTTTCCATCCG 1871
Db 3808 TCTAGTCGTCTATCGTGGCTCTGAGCTCTCTTCTTACCTATATATTTTCCATCCG 3865
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RESULT 3

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US-08-277-031B-4
; Sequence 4, Application US/08277031B
; Patent No. 6620593
; GENERAL INFORMATION:
; APPLICANT: Hayashi, Koji
```

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; APPLICANT: Sakaki, Toshiyuki
; APPLICANT: Yabusaki, Yoshiyasu
; APPLICANT: Komai, Koichiro
; APPLICANT: Kaneko, Hideo
; APPLICANT: Nakatsuka, Iwao
; TITLE OF INVENTION: METHOD FOR SAFETY EVALUATION OF
; TITLE OF INVENTION: CHEMICAL COMPOUND USING RECOMBINANT YEAST EXPRESSING
; TITLE OF INVENTION: HUMAN CYTOCHROME P450
; NUMBER OF SEQUENCES: 42
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Birch, Stewart, Kolasch & Birch
; STREET: P.O. Box 747
; CITY: Falls Church
; STATE: Virginia
; COUNTRY: USA
; ZIP: 22040-0747
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Diskette, 3.5inch, 1.44MB
; COMPUTER: IBM PC
; OPERATING SYSTEM: Dos 5.0
; SOFTWARE: WordPerfect 5.1
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/277,031B
; FILING DATE: 19-JULY-1994
; CLASSIFICATION: 435
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: JP-201120/1993
; APPLICATION NUMBER: JP-180246/1993
; APPLICATION NUMBER: JP-208279/1993
; FILING DATE: 20-07-1993
; FILING DATE: 21-07-1993
; FILING DATE: 30-07-1993
; ATTORNEY/AGENT INFORMATION:
; NAME: Raymond C. Stewart
; REGISTRATION NUMBER: 21,066
; REFERENCE/DOCKET NUMBER: 20-3530P
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 703-205-8000
; TELEFAX: 703-205-8050
; TELEX:
; INFORMATION FOR SEQ ID NO: 4:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 1512
; TYPE: nucleic acid
; STRANDEDNESS: double
; TOPOLOGY: linear
; US-08-277-031B-4

Query Match      2.5%; Score 48.4; DB 3; Length 1512;
Best Local Similarity 50.7%; Pred. No. 0.00078;
Matches 146; Conservative 0; Mismatches 136; Indels 6; Gaps 1;

Qy 997 AAAAGCTGTCGATGAGGAGGTACTCGCTCAGATCAGTAACCTGTTATTGCTGGATATG 1056
Db 863 AAGCTCTGTCGATCTGGAGCTCGTGGCCCAATCAATTATCTTTATTTTCTGGCTATG 922

Qy 1057 AAATCTTCTCAGACAGTCTTGACATGGATGTTTACCAGCTCTCAGACACAAAGCGTTC 1116
Db 923 AAACACGAGCAGTGTCTCTCTTCATTATGTATGAATCGGCACTCACCTGATGTCC 982

Qy 1117 AGGATAAACTTCGAGAGAGAAATTTGTCCAGATCGACACGATATGCTACGCTAGACGAAC 1176
Db 983 AGCAGAACTCAGAGAGAAATTTGATGAGTTTACCAATAAGGCACCACTGATG 1042

Qy 1177 TTAATGCGTTGC-----CTTATCTCGAAGCGTTGTTTAAGAGGTCTCTTCTGCTAGACC 1230
Db 1043 ATACTGTCTACAGATGGAGTATCTTGACATGGTGGTGAATGAAACGCTCAGATTATTCC 1102

Qy 1231 CTCCTAGTCCGTTAGCTTAACCGTGAATGCTTTAAAGGATGAAGACTTCA 1278
Db 1103 CAATTGCTATGAGACTTGAGAGGGGTCTGCAAAAAGATGTTGAGATCA 1150
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RESULT 4
US-09-023-655-1062
; Sequence 1062, Application US/09023655
; Patent No. 6607879
; GENERAL INFORMATION:
; APPLICANT: Cocks, Benjamin G.
; APPLICANT: Susan G. Stuart
; APPLICANT: Jeffrey J. Seilhamer
; TITLE OF INVENTION: COMPOSITION FOR THE DETECTION OF BLOOD CELL GENE
; TITLE OF INVENTION: EXPRESSION
; NUMBER OF SEQUENCES: 1508
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: INCYTE PHARMACEUTICALS, INC.
; STREET: 3174 PORTER DRIVE
; CITY: PALO ALTO
; STATE: CALIFORNIA
; COUNTRY: USA
; ZIP: 94304
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Word Perfect 6.1 for Windows/MS-DOS 6.2
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/09/023,655
; FILING DATE: HEREWITH
; CLASSIFICATION:
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER:
; FILING DATE:
; CLASSIFICATION:
; ATTORNEY/AGENT INFORMATION:
; NAME: Zeller, Karen J.
; REGISTRATION NUMBER: 37,071
; REFERENCE/DOCKET NUMBER: PA-0001 US
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (650) 855-0555
; TELEFAX: (650) 845-4166
; INFORMATION FOR SEQ ID NO: 1062:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 2059 base pairs
; TYPE: nucleic acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; IMMEDIATE SOURCE:
; LIBRARY: GENBANK
; CLONE: g181373
US-09-023-655-1062

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Query Match	2.5%	Score	48.4	DB 3	Length	2059
Best Local Similarity	50.7%	Pred.	No.	0.00095		
Matches	146	Conservative	0	Mismatches	136	Indels
					6	Gaps
QY	997	AAAAAGCTCTCCGATGAGGAGTACTCGCTCAGATCAGTAACTGTATTTCGTGATG	1056			
DB	953	AAGCTCTGTCGATCTGGAGCTCGTGCCCAATCAATTATCTTAATTTTGTGCGCTATG	1012			
QY	1057	AAACTTCTTCACAGTCTTGACATGGATGTTTCACCGACTCTCAGAAGACAAAGCCGPTC	1116			
DB	1013	AAACACAGCAGATGTTCTCTCTCTCAATTATGATGAACCTGGCCACTCACCCCTGATGCC	1072			
QY	1117	AGGATAAACTTCGAGAAGAAATTTGTCAGATCGACACGGATATGCTACGGTAGACGAAC	1176			
DB	1073	AGCAGAAACTCAGGAGGAAATTTGATGTCAGTTTTTACCCAATTAAGGACACCCACCTATG	1132			
QY	1177	TTAATGGGTGC-----CTTATCTCGAGCGTTTGTAAAGAGTCTCTTCGTCTAGACC	1230			
DB	1133	ATATGTGCTACAGATGGAGTATCTTCACATGGTGTGAATGAACCGTTCAGATTATTCC	1192			
QY	1231	CTCTAGTCGGTATGCTAAACCGTGAATGCTTTAAAGGATGAAGACTTCA	1278			
DB	1193	CAATTGCTATGAGACTTGAGAGGCTCTGCAAAAAGATGTTTGAGATCA	1240			

RESULT 5
US-09-949-016-2691
; Sequence 2691, Application US/09949016
; Patent No. 6812339
; GENERAL INFORMATION:
; APPLICANT: VENTER, J. Craig et al.
; TITLE OF INVENTION: POLYMORPHISMS IN KNOWN GENES ASSOCIATED
; TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF
; FILE REFERENCE: C0001307
; CURRENT APPLICATION NUMBER: US/09/949,016
; CURRENT FILING DATE: 2000-04-14
; PRIOR APPLICATION NUMBER: 60/241,755
; PRIOR FILING DATE: 2000-10-20
; PRIOR APPLICATION NUMBER: 60/237,768
; PRIOR FILING DATE: 2000-10-03
; PRIOR APPLICATION NUMBER: 60/231,498
; PRIOR FILING DATE: 2000-09-08
; NUMBER OF SEQ ID NOS: 207012
; SOFTWARE: Fast-Seq for Windows Version 4.0
; SEQ ID NO 2691
; LENGTH: 2079
; TYPE: DNA
; ORGANISM: Human
US-09-949-016-2691

Query Match	2.5%;	Score 48.4;	DB 3;	Length 2079;
Best Local Similarity	50.7%;	Pred. No. 0.00095;		
Matches 146;	Conservative 0;	Mismatches 136;	Indels 6;	Gaps 1;
Qy	997	AAAAGCTGTCGGATGAGGAGGTACTCGCTCAGATCAGTAACCTGTTATTATTGCTGGATATG	1056	
Db	968	AAGCTCTGTCGGATCTGGAGCTCGTGCCCAATCATTTATTTTGGCTGCTATG	1027	
Qy	1057	AAACTTCTTCGACAGCTCTTGACATGATGATGTTTCACCGACTCTCAGAAGACAAAGCCGTTTC	1116	
Db	1028	AAACACAGACGAGTGTCTCTCTCATTTATGATGAACCTGGCCACTCAACCTGATGTCC	1087	
Qy	1117	AGGATAAACTTCGAGAAGAAATTTGTGCAGATCGACACGGATATGCCCTAGCTAGACGAAC	1176	
Db	1088	AGCAGAAACTGCGAGGAGGAAATTTGATGCAGTTTATCCCAATTAAGGCACCAACCACCTATG	1147	
Qy	1177	TTAATGCGTTGC-----CTTATCTCGAGCGCTTTGTTAAGGAGTCTCTTCGCTAGACC	1230	
Db	1148	ATACTGTGTACAGATGGAGTAICTTGCATGCTGGTGAATGAACGCCTCAGATTATTCC	1207	
Qy	1231	CTCTTAGTCCGTCATGCTAACCGTGAATGCTTAAAGGATGAAGACTTCA	1278	
Db	1208	CAATTGCTATGAGACTTGAGAGGGTCTGCAAAAAGATGTTGAGATCA	1255	

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RESULT 6
US-09-144-367-1
; Sequence 1, Application US/09144367
; Patent No. 6432639
; GENERAL INFORMATION:
; APPLICANT: Lichter, Jay
; APPLICANT: Guido, Marco
; TITLE OF INVENTION: GENOTYPING OF HUMAN CYP3A4
; FILE REFERENCE: SEQ-12P
; CURRENT APPLICATION NUMBER: US/09/144,367
; CURRENT FILING DATE: 1998-08-31
; PRIOR APPLICATION NUMBER: 1997-09-10
; PRIOR FILING DATE: 1997-09-10
; NUMBER OF SEQ ID NOS: 58
; SOFTWARE: FastSeq for Windows Version 3.0
; SEQ ID NO 1
; LENGTH: 2759
; TYPE: DNA
; ORGANISM: H. sapiens
; FEATURE:
; NAME/KEY: CDS
; LOCATION: (70)...(1581)

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; OTHER INFORMATION: Human CYP3A4 cDNA reference sequence
US-09-144-367-1

Query Match          2.5%; Score 48.4; DB 3; Length 2759;
Best Local Similarity 50.7%; Pred. No. 0.0011;
Matches 146; Conservative 0; Mismatches 136; Indels 6; Gaps 1;

Qy 997 AAAAGCTGTCGGATGAGGAGTACTCGCTCAGATCACTAACCTGTTATTTGCTGGATG 1056
Db ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
932 AAGCTCTGTCGGATGAGGAGTCTGGCGCCCAATCAATATCTTTATTTTGGTGGCTATG 991
Qy 1057 AAATCTTTCGACAGTCTTGACATGGATGTTTACCGACTCTCAGAGACAAAACCGCTTC 1116
Db ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
992 AAACACAGACAGTGTCTCTCTCTCATATATGATGAATGCGCACTCACCTGATGTCC 1051
Qy 1117 AGGATAAACTTCGAGAGAAATTTGTGATGCGACACGGATATCCCTACGCTAGACGAAC 1176
Db ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
1052 AGCAGAACTCGAGGAGGAATTCAGTGCAGTTCATACCAATAAGGACACCCACCTATG 1111
Qy 1177 TTAATGGCTTC-----CTTATCTCGAAGCGTTTGTAAAGGATCTCTTCGCTAGACC 1230
Db ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
1112 ATACTGTCTACAGATGGAGTATCTTGACATGGTGGTGAATGAACGCTCAGATTATTC 1171
Qy 1231 CTCCTAGTCCCTATGCTAAACGCTGAATGCTTAAAGGATGAAGACTTCA 1278
Db ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
1172 CAATTGCTATGAGACTTGAGAGGGTCTGCAAAAAGATGTTGAGATCA 1219

RESULT 7
US-09-949-016-1221
; Sequence 1221, Application US/09949016
; Patent No. 6812339
; GENERAL INFORMATION:
; APPLICANT: VENTER, J. Craig et al.
; TITLE OF INVENTION: POLYMORPHISMS IN KNOWN GENES ASSOCIATED
; WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF
; FILE REFERENCE: CL001307
; CURRENT APPLICATION NUMBER: US/09/949,016
; CURRENT FILING DATE: 2000-04-14
; PRIOR APPLICATION NUMBER: 60/241,755
; PRIOR FILING DATE: 2000-10-20
; PRIOR APPLICATION NUMBER: 60/237,768
; PRIOR FILING DATE: 2000-10-03
; PRIOR APPLICATION NUMBER: 60/231,498
; PRIOR FILING DATE: 2000-09-08
; NUMBER OF SEQ ID NOS: 207012
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 1221
; LENGTH: 2768
; TYPE: DNA
; ORGANISM: Human
US-09-949-016-1221

Query Match          2.5%; Score 48.4; DB 3; Length 2768;
Best Local Similarity 50.7%; Pred. No. 0.0011;
Matches 146; Conservative 0; Mismatches 136; Indels 6; Gaps 1;

Qy 997 AAAAGCTGTCGGATGAGGAGTACTCGCTCAGATCACTAACCTGTTATTTGCTGGATG 1056
Db ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
967 AAGCTCTGTCGGATGAGGAGTCTGGCGCCCAATCAATATCTTTATTTTGGTGGCTATG 1026
Qy 1057 AAATCTTTCGACAGTCTTGACATGGATGTTTACCGACTCTCAGAGACAAAACCGCTTC 1116
Db ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
1027 AAACACAGCAGAGTGTCTCTCTCTCATATGATGAATGCGCACTCACCTGATGTCC 1086
Qy 1117 AGGATAAACTTCGAGAGAAATTTCTCAGATCGACACGGATATGCTAGCTAGACGAAC 1176
Db ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
1087 AGCAGAACTCGAGGAGGAATTTGATGAGTTCATACCAATAAGGACACACCACCTATG 1146
Qy 1177 TTAATGCGTTC-----CTTATCTCGAAGCGTTTGTAAAGGATCTCTTCGCTAGACC 1230
Db ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
1147 ATACTGTCTACAGATGGAGTATCTTGACATGGTGGTGAATGAACGCTCAGATTATTC 1206
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Qy 1231 CTCCTAGTCCGTATGCTAACCGTGAATGCTTAAAGGATGAAGACTTCA 1278
Db 1207 CAATTGCTATGAGACTTGAGGGCTCTGCAAAAAGATGTTGAGATCA 1254

RESULT 8
US-09-716-129-12
; Sequence 12, Application US/09716129
; Patent No. 6632920
; GENERAL INFORMATION:
; APPLICANT: Rosen et al.
; TITLE OF INVENTION: 36 Human Secreted Proteins
; FILE REFERENCE: P2025P1
; CURRENT APPLICATION NUMBER: US/09/716,129
; CURRENT FILING DATE: 2000-11-17
; PRIOR APPLICATION NUMBER: 60/076,053
; PRIOR FILING DATE: 1998-02-26
; PRIOR APPLICATION NUMBER: 60/076,057
; PRIOR FILING DATE: 1998-02-26
; PRIOR APPLICATION NUMBER: 60/076,052
; PRIOR FILING DATE: 1998-02-26
; PRIOR APPLICATION NUMBER: 60/076,054
; PRIOR FILING DATE: 1998-02-26
; PRIOR APPLICATION NUMBER: 60/076,051
; PRIOR FILING DATE: 1998-02-26
; NUMBER OF SEQ ID NOS: 186
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 12
; LENGTH: 2160
; TYPE: DNA
; ORGANISM: Homo sapiens
US-09-716-129-12

Query Match          2.5%; Score 47.4; DB 3; Length 2160;
Best Local Similarity 70.8%; Pred. No. 0.002;
Matches 63; Conservative 0; Mismatches 26; Indels 0; Gaps 0;

Qy 1826 ATCGTCGCTCTGGACTCTCTTCTTACCCTATATATTTCATCCGAAAAA 1885
Db 2069 ATTGTCCGCTGACTAAGAACTTGACCTAATAATAATCCACAAGTATATA 2128
Qy 1886 AAAAAAAGGCGCGCTCGAG 1914
Db 2129 AAAAAAAGGCGCGCTCGCG 2157

RESULT 9
US-09-148-545-106
; Sequence 106, Application US/09148545
; Patent No. 6590075
; GENERAL INFORMATION:
; APPLICANT: Rosen et al.
; TITLE OF INVENTION: 70 Human Secreted Proteins
; FILE REFERENCE: P2001P1
; CURRENT APPLICATION NUMBER: US/09/148,545
; CURRENT FILING DATE: 1998-09-04
; PRIOR APPLICATION NUMBER: PCT/US98/04482
; EARLIER FILING DATE: 1998-03-06
; EARLIER APPLICATION NUMBER: 60/040,162
; EARLIER FILING DATE: 1997-03-07
; EARLIER APPLICATION NUMBER: 60/040,333
; EARLIER FILING DATE: 1997-03-07
; EARLIER APPLICATION NUMBER: 60/038,621
; EARLIER FILING DATE: 1997-03-07
; EARLIER APPLICATION NUMBER: 60/040,161
; EARLIER FILING DATE: 1997-03-07
; EARLIER APPLICATION NUMBER: 60/040,626
; EARLIER FILING DATE: 1997-03-07
; EARLIER APPLICATION NUMBER: 60/040,334
; EARLIER FILING DATE: 1997-03-07
; EARLIER APPLICATION NUMBER: 60/040,336
; EARLIER FILING DATE: 1997-03-07
; EARLIER APPLICATION NUMBER: 60/040,163
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1	EARLIER APPLICATION NUMBER: 60/056,877
2	EARLIER FILING DATE: 1997-08-22
3	EARLIER APPLICATION NUMBER: 60/056,889
4	EARLIER FILING DATE: 1997-08-22
5	EARLIER APPLICATION NUMBER: 60/056,893
6	EARLIER FILING DATE: 1997-08-22
7	EARLIER APPLICATION NUMBER: 60/056,630
8	EARLIER FILING DATE: 1997-08-22
9	EARLIER APPLICATION NUMBER: 60/056,878
10	EARLIER FILING DATE: 1997-08-22
11	EARLIER APPLICATION NUMBER: 60/056,662
12	EARLIER FILING DATE: 1997-08-22
13	EARLIER APPLICATION NUMBER: 60/056,872
14	EARLIER FILING DATE: 1997-08-22
15	EARLIER APPLICATION NUMBER: 60/056,882
16	EARLIER FILING DATE: 1997-08-22
17	EARLIER APPLICATION NUMBER: 60/056,637
18	EARLIER FILING DATE: 1997-08-22
19	EARLIER APPLICATION NUMBER: 60/056,903
20	EARLIER FILING DATE: 1997-08-22
21	EARLIER APPLICATION NUMBER: 60/056,888
22	EARLIER FILING DATE: 1997-08-22
23	EARLIER APPLICATION NUMBER: 60/056,879
24	EARLIER FILING DATE: 1997-08-22
25	EARLIER APPLICATION NUMBER: 60/056,880
26	EARLIER FILING DATE: 1997-08-22
27	EARLIER APPLICATION NUMBER: 60/056,894
28	EARLIER FILING DATE: 1997-08-22
29	EARLIER APPLICATION NUMBER: 60/056,911
30	EARLIER FILING DATE: 1997-08-22
31	EARLIER APPLICATION NUMBER: 60/056,636
32	EARLIER FILING DATE: 1997-08-22
33	EARLIER APPLICATION NUMBER: 60/056,874
34	EARLIER FILING DATE: 1997-08-22
35	EARLIER APPLICATION NUMBER: 60/056,910
36	EARLIER FILING DATE: 1997-08-22
37	EARLIER APPLICATION NUMBER: 60/056,864
38	EARLIER FILING DATE: 1997-08-22
39	EARLIER APPLICATION NUMBER: 60/056,631
40	EARLIER FILING DATE: 1997-08-22
41	EARLIER APPLICATION NUMBER: 60/056,845
42	EARLIER FILING DATE: 1997-08-22
43	EARLIER APPLICATION NUMBER: 60/056,892
44	EARLIER FILING DATE: 1997-08-22
45	EARLIER APPLICATION NUMBER: 60/047,595
46	EARLIER FILING DATE: 1997-05-23
47	EARLIER APPLICATION NUMBER: 60/057,761
48	EARLIER FILING DATE: 05-Sep-1997
49	EARLIER APPLICATION NUMBER: 60/047,599
50	EARLIER FILING DATE: 1997-05-23
51	EARLIER APPLICATION NUMBER: 60/047,588
52	EARLIER FILING DATE: 1997-05-23
53	EARLIER APPLICATION NUMBER: 60/047,585
54	EARLIER FILING DATE: 1997-05-23
55	EARLIER APPLICATION NUMBER: 60/047,586
56	EARLIER FILING DATE: 1997-05-23
57	EARLIER APPLICATION NUMBER: 60/047,590
58	EARLIER FILING DATE: 1997-05-23
59	EARLIER APPLICATION NUMBER: 60/047,594
60	EARLIER FILING DATE: 1997-05-23
61	EARLIER APPLICATION NUMBER: 60/047,589
62	EARLIER FILING DATE: 1997-05-23
63	EARLIER APPLICATION NUMBER: 60/047,593
64	EARLIER FILING DATE: 1997-05-23
65	EARLIER APPLICATION NUMBER: 60/047,614
66	EARLIER FILING DATE: 1997-05-23
67	EARLIER APPLICATION NUMBER: 60/043,578
68	EARLIER FILING DATE: 1997-04-11
69	EARLIER APPLICATION NUMBER: 60/043,576
70	EARLIER FILING DATE: 1997-04-11
71	EARLIER APPLICATION NUMBER: 60/047,501
72	EARLIER FILING DATE: 1997-05-23
73	EARLIER APPLICATION NUMBER: 60/043,670

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; EARLIER FILING DATE: 1997-04-11
; EARLIER APPLICATION NUMBER: 60/056,632
; EARLIER FILING DATE: 1997-08-22
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; EARLIER FILING DATE: 1997-08-22
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; EARLIER FILING DATE: 1997-08-22
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; EARLIER FILING DATE: 1997-08-22
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; EARLIER APPLICATION NUMBER: 60/056,887
; EARLIER FILING DATE: 1997-08-22
; EARLIER APPLICATION NUMBER: 60/056,908
; EARLIER FILING DATE: 1997-08-22
; EARLIER APPLICATION NUMBER: 60/048,964
; EARLIER FILING DATE: 1997-06-06
; EARLIER APPLICATION NUMBER: 60/057,650
; EARLIER FILING DATE: 1997-09-05
; EARLIER APPLICATION NUMBER: 60/056,884
; EARLIER FILING DATE: 1997-08-22
; NUMBER OF SEQ ID NOS: 280
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 106
; LENGTH: 1712

Query Match      2.4%; Score 46.8; DB 3; Length 1712;
Best Local Similarity 85.0%; Pred. No. 0.0026;
Matches 51; Conservative 1; Mismatches 8; Indels 0; Gaps 0;

QY 1854 TATATATTATTCATCCGAAAAAAGCGCCGCTCGA 1913
DB 1645 TAAATATATTTTGTACAAAAAAGCGCCGCTCGA 1704

RESULT 10
US-09-621-011-106
; Sequence 106, Application US/09621011
; Patent No. 6878687
; GENERAL INFORMATION:
; APPLICANT: Rosen et al.
; TITLE OF INVENTION: 70 Human Secreted Proteins
; FILE REFERENCE: P2001P1
; CURRENT APPLICATION NUMBER: US/09/621,011
; CURRENT FILING DATE: 2000-07-20
; Prior application data removed - consult PALM or file wrapper
; NUMBER OF SEQ ID NOS: 280
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 106
; LENGTH: 1712
; TYPE: DNA
; ORGANISM: Homo sapiens
; US-09-621-011-106

Query Match      2.4%; Score 46.8; DB 3; Length 1712;
Best Local Similarity 85.0%; Pred. No. 0.0026;
Matches 51; Conservative 1; Mismatches 8; Indels 0; Gaps 0;

QY 1854 TATATATTATTCATCCGAAAAAAGCGCCGCTCGA 1913
DB 1645 TAAATATATTTTGTACAAAAAAGCGCCGCTCGA 1704

RESULT 11
US-09-148-545-105
; Sequence 105, Application US/09148545
; Patent No. 6590075
; GENERAL INFORMATION:
; APPLICANT: Rosen et al.
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; TITLE OF INVENTION: 70 Human Secreted Proteins
; FILE REFERENCE: P2001P1
; CURRENT APPLICATION NUMBER: US/09/148,545
; CURRENT FILING DATE: 1998-09-04
; EARLIER APPLICATION NUMBER: PCT/US98/04482
; EARLIER FILING DATE: 1998-03-06
; EARLIER APPLICATION NUMBER: 60/040,162
; EARLIER FILING DATE: 1997-03-07
; EARLIER APPLICATION NUMBER: 60/040,333
; EARLIER FILING DATE: 1997-03-07
; EARLIER APPLICATION NUMBER: 60/038,621
; EARLIER FILING DATE: 1997-03-07
; EARLIER APPLICATION NUMBER: 60/040,161
; EARLIER FILING DATE: 1997-03-07
; EARLIER APPLICATION NUMBER: 60/040,626
; EARLIER FILING DATE: 1997-03-07
; EARLIER APPLICATION NUMBER: 60/040,334
; EARLIER FILING DATE: 1997-03-07
; EARLIER APPLICATION NUMBER: 60/040,336
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; EARLIER APPLICATION NUMBER: 60/040,163
; EARLIER FILING DATE: 1997-03-07
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; EARLIER FILING DATE: 1997-05-23
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; EARLIER FILING DATE: 1997-05-23
; EARLIER APPLICATION NUMBER: 60/047,597
; EARLIER FILING DATE: 1997-05-23
; EARLIER APPLICATION NUMBER: 60/047,502
; EARLIER FILING DATE: 1997-05-23
; EARLIER APPLICATION NUMBER: 60/047,633
; EARLIER FILING DATE: 1997-05-23
; EARLIER APPLICATION NUMBER: 60/047,583
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; EARLIER FILING DATE: 1997-05-23
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; EARLIER APPLICATION NUMBER: 60/047,612
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; EARLIER FILING DATE: 1997-05-23
; EARLIER APPLICATION NUMBER: 60/047,601
; EARLIER FILING DATE: 1997-05-23
; EARLIER APPLICATION NUMBER: 60/043,580
; EARLIER FILING DATE: 1997-04-11
; EARLIER APPLICATION NUMBER: 60/043,568
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; EARLIER APPLICATION NUMBER: 60/043,314
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; EARLIER APPLICATION NUMBER: 60/043,569
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; EARLIER FILING DATE: 1997-04-11
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; EARLIER APPLICATION NUMBER: 60/056,877
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; EARLIER FILING DATE: 1997-08-22
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; EARLIER FILING DATE: 1997-05-23
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; EARLIER FILING DATE: 05-Sep-1997
; EARLIER APPLICATION NUMBER: 60/047,599
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; EARLIER FILING DATE: 1997-05-23

; EARLIER APPLICATION NUMBER: 60/047,585
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; EARLIER FILING DATE: 1997-05-23
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; EARLIER FILING DATE: 1997-05-23
; EARLIER APPLICATION NUMBER: 60/047,614
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; EARLIER FILING DATE: 1997-04-11
; EARLIER APPLICATION NUMBER: 60/043,576
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; EARLIER APPLICATION NUMBER: 60/047,501
; EARLIER FILING DATE: 1997-05-23
; EARLIER APPLICATION NUMBER: 60/043,670
; EARLIER FILING DATE: 1997-04-11
; EARLIER APPLICATION NUMBER: 60/056,632
; EARLIER FILING DATE: 1997-08-22
; EARLIER APPLICATION NUMBER: 60/056,664
; EARLIER FILING DATE: 1997-08-22
; EARLIER APPLICATION NUMBER: 60/056,876
; EARLIER FILING DATE: 1997-08-22
; EARLIER APPLICATION NUMBER: 60/056,881
; EARLIER FILING DATE: 1997-08-22
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; EARLIER FILING DATE: 1997-08-22
; EARLIER APPLICATION NUMBER: 60/056,875
; EARLIER FILING DATE: 1997-08-22
; EARLIER APPLICATION NUMBER: 60/056,862
; EARLIER FILING DATE: 1997-08-22
; EARLIER APPLICATION NUMBER: 60/056,887
; EARLIER FILING DATE: 1997-08-22
; EARLIER APPLICATION NUMBER: 60/056,908
; EARLIER FILING DATE: 1997-08-22
; EARLIER APPLICATION NUMBER: 60/048,964
; EARLIER FILING DATE: 1997-06-06
; EARLIER APPLICATION NUMBER: 60/057,650
; EARLIER FILING DATE: 1997-09-05
; EARLIER APPLICATION NUMBER: 60/056,884
; EARLIER FILING DATE: 1997-08-22
; NUMBER OF SEQ ID NOS: 280
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 105
; LENGTH: 1822

Query Match 2.4%; Score 46.8; DB 3; Length 1822;
Best Local Similarity 85.0%; Pred. No. 0.0027;
Matches 51; Conservative 1; Mismatches 8; Indels 0; Gaps 0;

Oy 1854 TATATATTATTCATCCGAAAAA
Db 1755 TAAATATATTTTGTACAAAAA

RESULT 12

US-09-621-011-105
; Sequence 105, Application US/09621011
; Patent No. 6878687
; GENERAL INFORMATION:
; APPLICANT: Rosen et al.
; TITLE OF INVENTION: 70 Human Secreted Proteins
; FILE REFERENCE: P2001P1
; CURRENT APPLICATION NUMBER: US/09/621,011
; CURRENT FILING DATE: 2000-07-20
; Prior application data removed - consult PALM or file wrapper
; NUMBER OF SEQ ID NOS: 280
; SOFTWARE: PatentIn Ver. 2.0


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; SEQ ID NO 105
; LENGTH: 1822
; TYPE: DNA
; ORGANISM: Homo sapiens
US-09-621-011-105

Query Match          2.4%; Score 46.8; DB 3; Length 1822;
Best Local Similarity 85.0%; Pred. No. 0.0027;
Matches 51; Conservative 1; Mismatches 8; Indels 0; Gaps 0;

Qy 1854 TATATATTATCCATCCGAAAAAAGGCGCGCTCGA 1913
Db 1755 TAAATATATTTTGTACAAAAAAGGCGCGCTCGA 1814

RESULT 13
US-09-949-016-2690
; Sequence 2690, Application US/09949016
; Patent No. 6812339
; GENERAL INFORMATION:
; APPLICANT: VENTER, J. Craig et al.
; TITLE OF INVENTION: POLYMORPHISMS IN KNOWN GENES ASSOCIATED
; WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF
; FILE REFERENCE: CL001307
; CURRENT APPLICATION NUMBER: US/09/949,016
; CURRENT FILING DATE: 2000-04-14
; PRIOR APPLICATION NUMBER: 60/241,755
; PRIOR FILING DATE: 2000-10-20
; PRIOR APPLICATION NUMBER: 60/237,768
; PRIOR FILING DATE: 2000-10-03
; PRIOR APPLICATION NUMBER: 60/231,498
; PRIOR FILING DATE: 2000-09-08
; NUMBER OF SEQ ID NOS: 207012
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 2690
; LENGTH: 2080
; TYPE: DNA
; ORGANISM: Human
US-09-949-016-2690

Query Match          2.3%; Score 45.2; DB 3; Length 2080;
Best Local Similarity 50.0%; Pred. No. 0.009;
Matches 144; Conservative 0; Mismatches 138; Indels 6; Gaps 1;

Qy 997 AAAAGCTCTCCGATGAGGAGTCTCGCTCAGATCAGTAACCTGTTATTGCTGGATATG 1056
Db 968 AAGCTCTGCTGATCTGAGCTCATGGCCCAATCAATATCTTTATTATTGCTGGCTATG 1027
Qy 1057 AAACCTCTTCGACAGTCTTGACATGGATGTTTCACCGACTCTCAGAACAAAGCCGTTG 1116
Db 1028 AAACACGAGCAGTGTCTCTCTTCATTATATATGAATGACCTCACCCTGATGTCC 1087
Qy 1117 AGGATAAACTTCGAGAAGAAATTTGTCAGATCGACACGATATGCTTACGCTAGACGAAC 1176
Db 1088 AGCAGAAATGTCAGAGAAGAAATTTGATACAGTTTACCCTAACGACCAACCCCTATG 1147
Qy 1177 TTAATGCTC-----GTTGCTTATCTCGAAGCGTTTGTAAAGAGTCTCTTCTGCTAGACC 1230
Db 1148 ATACTGTGCTACAGTTGGAGTATCTTGACATGGTGTGAATGAACACTCAGATTATTCC 1207
Qy 1231 CTCCTAGTCCGATGCTTACCGTGAATGCTTTAAAGATGAAGACTTCA 1278
Db 1208 CAGTTGCTATGAGACTTGAGAGGGTCTGCAAAAAAGATGTTGAAATCA 1255

RESULT 14
US-08-948-564-15
; Sequence 15, Application US/08948564
; Patent No. 6121512
; GENERAL INFORMATION:
; APPLICANT: Siminezky, Balazs
; APPLICANT: Dewey, Ralph E.
; APPLICANT: Corbin, Frederick T.
```

```
; TITLE OF INVENTION: No. 6121512el Cytochrome P-450 Constructs and
; TITLE OF INVENTION: Methods of Producing Herbicide-Resistant Transgenic Plants
; NUMBER OF SEQUENCES: 23
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Virginia C. Bennett
; STREET: PO Box 37428
; CITY: Raleigh
; STATE: No. 6121512th Carolina
; COUNTRY: USA
; ZIP: 27627
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/948,564
; FILING DATE:
; CLASSIFICATION: 800
; ATTORNEY/AGENT INFORMATION:
; NAME: Bennett, Virginia C.
; REGISTRATION NUMBER: 37,092
; REFERENCE/DOCKET NUMBER: 5051-409
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 919-854-1400
; TELEFAX: 919-854-1401
; INFORMATION FOR SEQ ID NO: 15:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 1831 base pairs
; TYPE: nucleic acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; MOLECULE TYPE: cDNA
; FEATURE:
; NAME/KEY: CDS
; LOCATION: 20..1747
; US-08-948-564-15
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Query Match          2.3%; Score 45; DB 3; Length 1831;
Best Local Similarity 52.8%; Pred. No. 0.0096;
Matches 121; Conservative 0; Mismatches 105; Indels 3; Gaps 1;

Qy 1008 GATGAGGAGGTACTCGCTCAGATCAGTAACCTGTTATTGCTGGATATGAACCTTCTTCG 1067
Db 1037 GATCGTCAGTTGAGGATGATTTAATGCAATGCTTATTCGGGTGATGAACAACGCT 1096
Qy 1068 ACAGTCTTGACATGATGTTTACCGACTCTCTCAGAACAAAGCGGTTCAGGATAAATCTT 1127
Db 1097 GCAGTTCTTACTTGGGAGTCTTCTCTAGCTCAAAATCCTAGCAAAATGAAGAAGCT 1156
Qy 1128 CGAGAAGA--AATTGTCAGATCGACCGGATGCTAGCTAGAGAACTTAATGCG 1184
Db 1157 CAACGACAGGTAGATTTGGTGCTGGGTACGGGGAGGCCAATTTTGAATCACTTAAGAA 1216
Qy 1185 TTGCTTATCTCGAAGCGTTTGTAAAGAGTCTCTTCTGCTAGACCTTC 1233
Db 1217 TTGACATACATTAGATTGTTGTGAGAGCTCTTCGTTTATACCCC 1265
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RESULT 15

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US-09-709-103-3
; Sequence 3, Application US/09709103
; Patent No. 6733991
; GENERAL INFORMATION:
; APPLICANT: Cismowski, Mary
; APPLICANT: Duzic, Emir
; TITLE OF INVENTION: AGS Proteins and Nucleic Acid Molecules and Uses Therefor
; FILE REFERENCE: 60388-A-PCT-US
; CURRENT APPLICATION NUMBER: US/09/709,103
; CURRENT FILING DATE: 2000-11-08
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 3
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; LENGTH: 1801
; TYPE: DNA
; ORGANISM: Homo Sapien
; FEATURE:
; NAME/KEY: CDS
; LOCATION: (154)..(996)
; OTHER INFORMATION:
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US-09-709-103-3

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Query Match      2.3%; Score 44.8; DB 3; Length 1801;
Best Local Similarity 95.8%; Pred. No. 0.011;
Matches 46; Conservative 0; Mismatches 2; Indels 0; Gaps 0;
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QY 1872 AAAAAAAAAAAAAAAAAAAAAAAAAAGCGCGCGCTCGAGCCGC 1919
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Db 1719 AAAAAAAAAAAAAAAAAAAAAAAAAAGCGCGCGCTCGAGCATGC 1766
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Search completed: November 21, 2005, 05:06:21
Job time : 264 secs

GenCore version 5.1.6
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OM protein - protein search, using sw model

Run on: November 21, 2005, 16:56:32 ; Search time 7 Seconds
(without alignments)
89.899 Million cell updates/sec

Title: US-10-066-007A-1
Perfect score: 2852
Sequence: 1 MFILVLTLTGALGAAAFSWAS.....RIVGREKEGYQMLQVKPVE 557

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 8323 seqs, 1129788 residues

Total number of hits satisfying chosen parameters: 8323

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : Published Applications AA New:
1: /cgn2_6/ptodata/2/pubpaa/US10_NEW_PUB.pep.*
2: /cgn2_6/ptodata/2/pubpaa/US06_NEW_PUB.pep.*
3: /cgn2_6/ptodata/2/pubpaa/US07_NEW_PUB.pep.*
4: /cgn2_6/ptodata/2/pubpaa/US08_NEW_PUB.pep.*
5: /cgn2_6/ptodata/2/pubpaa/US09_NEW_PUB.pep.*
6: /cgn2_6/ptodata/2/pubpaa/PCT_NEW_PUB.pep.*
7: /cgn2_6/ptodata/2/pubpaa/US11_NEW_PUB.pep.*
8: /cgn2_6/ptodata/2/pubpaa/US10_NEW_PUB.pep.*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	ID	Description
1	257.5	9.0	509	1	US-10-131-826A-108
2	158	5.5	524	1	US-10-507-106-4
3	150.5	5.3	504	1	US-10-131-826A-64
4	143	5.0	490	1	US-10-507-106-2
5	142	5.0	468	1	US-10-957-569-28
6	86	3.0	643	1	US-10-510-386-8
7	80.5	2.8	450	7	US-11-074-176-212
8	78	2.7	296	7	US-11-074-176-22
9	78	2.7	565	1	US-10-467-962B-109
10	77	2.7	2053	7	US-11-013-759-9
11	77	2.7	799	7	US-11-074-176-348
12	77	2.7	805	7	US-11-074-176-172
13	76.5	2.7	702	1	US-10-510-386-214
14	76.5	2.7	746	7	US-11-074-176-314
15	76.5	2.7	749	7	US-11-074-176-54
16	76	2.7	535	1	US-10-131-826A-124
17	74.5	2.6	756	7	US-11-074-176-202
18	73	2.6	542	7	US-11-074-176-30
19	73	2.6	865	7	US-11-109-156-4
20	73	2.6	1476	1	US-10-647-956A-4
21	72.5	2.5	322	7	US-11-109-156-33
22	72.5	2.5	364	1	US-10-981-873-30
23	72.5	2.5	614	1	US-10-519-447-2
24	72	2.5	242	7	US-11-082-389-366
25	72	2.5	386	7	US-11-022-562-229

ALIGNMENTS

RESULT 1

US-10-131-826A-108
; Sequence 108, Application US/10131826A
; Publication No. US20050245730A1
; GENERAL INFORMATION:
; APPLICANT: Baker, Kevin P.
; APPLICANT: Beresini, Maureen
; APPLICANT: Defoerge, Laura
; APPLICANT: Desnoyers, Luc
; APPLICANT: Filvaroff, Ellen
; APPLICANT: Gao, Wei-Qiang
; APPLICANT: Gerritsen, Mary E.
; APPLICANT: Goddard, Audrey
; APPLICANT: Godowski, Paul J.
; APPLICANT: Gurney, Austin L.
; APPLICANT: Sherwood, Steven
; APPLICANT: Smith, Victoria
; APPLICANT: Stewart, Timothy A.
; APPLICANT: Tumas, Daniel
; APPLICANT: Watanabe, Colin K
; APPLICANT: Wood, William
; APPLICANT: Zhang, Zemin
; TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC
; FILE REFERENCE: P3330R1C128
; CURRENT APPLICATION NUMBER: US/10/131,826A
; CURRENT FILING DATE: 2002-04-24
; PRIOR APPLICATION NUMBER: 60/049911
; PRIOR FILING DATE: 1997-06-18
; PRIOR APPLICATION NUMBER: 60/056974
; PRIOR FILING DATE: 1997-08-26
; PRIOR APPLICATION NUMBER: 60/059113
; PRIOR FILING DATE: 1997-09-17
; PRIOR APPLICATION NUMBER: 60/059115
; PRIOR FILING DATE: 1997-09-17
; PRIOR APPLICATION NUMBER: 60/059117
; PRIOR FILING DATE: 1997-09-17
; PRIOR APPLICATION NUMBER: 60/059122
; PRIOR FILING DATE: 1997-09-17
; PRIOR APPLICATION NUMBER: 60/059184
; PRIOR FILING DATE: 1997-09-17
; PRIOR APPLICATION NUMBER: 60/059263
; PRIOR FILING DATE: 1997-09-18
; PRIOR APPLICATION NUMBER: 60/059352
; PRIOR FILING DATE: 1997-09-19
; PRIOR APPLICATION NUMBER: 60/059588
; PRIOR FILING DATE: 1997-09-19
; Remaining Prior Application data removed - See File wrapper or PALM.

Sequence 5, Appl
Sequence 4, Appl
Sequence 7, Appl
Sequence 8, Appl
Sequence 37, Appl
Sequence 248, App
Sequence 18, Appl
Sequence 11, Appl
Sequence 142, App
Sequence 134, App
Sequence 90, Appl
Sequence 6, Appl
Sequence 73, Appl
Sequence 10, Appl
Sequence 318, App
Sequence 64, Appl
Sequence 214, App
Sequence 99, Appl
Sequence 32, Appl
Sequence 454, App

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; NUMBER OF SEQ ID NOS: 550
; SEQ ID NO 108
; LENGTH: 509
; TYPE: PRT
; ORGANISM: Homo Sapien
US-10-131-826A-108

Query Match          9.0%; Score 257.5; DB 1; Length 509;
Best Local Similarity 22.0%; Pred. No. 3e-16;
Matches 103; Conservative 94; Mismatches 185; Indels 87; Gaps 18;

QY 66 YREKYGSTLRFAGIAGAPVLNSTDPKFNHVMKEAYDYPKPGMAARVLRATGCGVTTAEGEAHKKRRHRRIMPSLSAQAVKSM 148
DB 123 DAENVKVLQNHGNTFVPAYPKSITELLGENSEILSINGPHQKR-----LHTL 169
QY 149 VFIFLEKGMELVDKMMEDAAEKDMAVGESAGEKATRLTEGVVDKVDKWTGVRATLDVWALA 208
DB 170 IGAFLL-RSPHLKDRITRD-----IEASVVLTLASWAQLPLVHVQDEIKKMTFELLVKV 221
QY 209 GFYKSDSLQNKTNELNYAFVGLTDGFAFTPLDSFKAIMWDFVFPYFTMKRRHBIPLTQGL 268
DB 222 ---LMSSTPCEDWNILKLEFEFIFKGLIC-----PIKFPGRTRYKSLKAKERL-----I 268
QY 269 AVSRVRGIELMCKQKQAVLGSASDAQVKKQVQGRDILSLLYRANITANLPEKSLSDDEE 328
DB 269 KMKVKY-----VEERQVAM---TTTSPANDVVDVLLRD-----GGSEKQSQPSDF 311
QY 329 VLAQISNLLFAGVETSTVLTWMPHRLSRDKAVQDKLREEICQIDTDMPTLDE-----L 382
DB 312 VSGKIVEMIPGEETMPTANTLAVKFLSDNPVALAKLVEENMEMKRRKLELGEYKWTDY 371
QY 383 NALPYLEAFVKESLRDPPSPYAN-----RECLKDEDFIPLAEPVIGRDSGVINEVRIT 436
DB 372 MSLSFTQNVINETLRM-----ANIINGVWRKALKDVE-----IKGYLIP 410
QY 437 KGTWMLPLFNFNRSKFIYGEDAEERPERPRLWLEDVTDLSN---IEAPYGHQASFISGPRA 494
DB 411 KGMCVLIASFISVHMDSDIY-DNPYQDPWRW-DRINGSANSISICFTPFPG-----GGQRL 462
QY 495 CFQWRFAVAKMAFLVTLRRVQF-----EPIISHP 525
DB 463 CFQGLESLKLEISIFLHLVTRYSWTAEBEIVSFP 497

RESULT 3
US-10-131-826A-64
; Sequence 64, Application US/10131826A
; Publication No. US20050245730A1
; GENERAL INFORMATION:
; APPLICANT: Baker, Kevin P.
; APPLICANT: Beresini, Maureen
; APPLICANT: DeForge, Laura
; APPLICANT: Desnoyers, Luc
; APPLICANT: Filvaroff, Ellen
; APPLICANT: Gao, Wei-Qiang
; APPLICANT: Gerritsen, Mary E.
; APPLICANT: Goddard, Audrey
; APPLICANT: Godowski, Paul J.
; APPLICANT: Gurney, Austin L.
; APPLICANT: Sherwood, Steven
; APPLICANT: Smith, Victoria
; APPLICANT: Stewart, Timothy A.
; APPLICANT: Tumas, Daniel
; APPLICANT: Watanabe, Colin K
; APPLICANT: Wood, William
; APPLICANT: Zhang, Zemin
; TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC
; FILE REFERENCE: P3330R1C128
; CURRENT FILING DATE: 2002-04-24
; PRIOR APPLICATION NUMBER: US/10/131,826A
; PRIOR FILING DATE: 2002-04-24
; PRIOR APPLICATION NUMBER: 60/049911
; PRIOR FILING DATE: 1997-06-18
; PRIOR APPLICATION NUMBER: 60/056974
; PRIOR FILING DATE: 1997-08-26
; PRIOR APPLICATION NUMBER: 60/059113
; PRIOR FILING DATE: 1997-09-17
; PRIOR APPLICATION NUMBER: 60/059115
; PRIOR FILING DATE: 1997-09-17
; PRIOR APPLICATION NUMBER: 60/059117
; PRIOR FILING DATE: 1997-09-17
; PRIOR APPLICATION NUMBER: 60/059122
; PRIOR FILING DATE: 1997-09-17

US-10-507-106-4
; Sequence 4, Application US/10507106
; Publication No. US2005024679A1
; GENERAL INFORMATION:
; APPLICANT: Japan Science and Technology Agency
; TITLE OF INVENTION: Gene participating in the synthesis of brassinosteroid
; FILE REFERENCE: 26352U (P503-311PCT)
; CURRENT APPLICATION NUMBER: US/10/507,106
; CURRENT FILING DATE: 2004-09-10
; NUMBER OF SEQ ID NOS: 6
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 4
; LENGTH: 524
; TYPE: PRT
; ORGANISM: Arabidopsis thaliana
US-10-507-106-4

Query Match          5.5%; Score 158; DB 1; Length 524;
Best Local Similarity 19.7%; Pred. No. 2.8e-07;
Matches 113; Conservative 89; Mismatches 213; Indels 160; Gaps 24;

QY 30 PRSSLY---NLQGP-NHNYFTGNFLDLSA-----RTGEHAKYR 67
DB 4 PASAGLFRSPENLWPYNYMDYLVAGFL-VITAGILLRPLWFLRNSKTKDGBEDNE 62
QY 68 EK-----YGSTLRF-----AGIAGAPVLNST 88
DB 63 EKKKGIMPGSLGWPVIGETLNFIACGYSRRPVTFMKRRKSLYKVKFTNIIGTPIIST 122
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; PRIOR APPLICATION NUMBER: 60/059184
; PRIOR FILING DATE: 1997-09-17
; PRIOR APPLICATION NUMBER: 60/059263
; PRIOR FILING DATE: 1997-09-18
; PRIOR APPLICATION NUMBER: 60/059352
; PRIOR FILING DATE: 1997-09-19
; PRIOR APPLICATION NUMBER: 60/059588
; PRIOR FILING DATE: 1997-09-19
; Remaining Prior Application data removed - See File Wrapper or PALM.
; NUMBER OF SEQ ID NOS: 550
; SEQ ID NO 64
; LENGTH: 504
; TYPE: PRT
; ORGANISM: Homo Sapien
US-10-131-826A-64

Query Match          5.3%; Score 150.5; DB 1; Length 504;
Best Local Similarity 22.3%; Pred. No. 1.2e-06;
Matches 130; Conservative 78; Mismatches 249; Indels 127; Gaps 25;

Qy 8 TGALGLAFAWSTAFSLYLAPRRSSLYNLQGNHNTYFTGNFLDILSARTGEHAKYR 67
Db 6 TWALLAL--ALLLLLTALSGTRARGHLPPGPTPLP-LILGNLLQRLPGALYSLMLRLS 61
Qy 68 EYGSTIRFAGIAGAPVLNSTDPKVFNVHM-KEAYDYPKPGMAARVLRATGDDGVVTAEG 126
Db 62 KKYGVFTYILGPRWPVVVLVQBAVREALGGQAEFFSGRGTVMLEGTDFDGHGVFFSNG 121
Qy 127 EAHKRHRIMTPSLSAQAVKSMVFIFLEKGMELVDKWMEDAAEKDMVAGSAGEK----- 181
Db 122 ERWQLKRTMLAL-----RDLGKRGEGBELQAE 152
Qy 182 ----KATRLTEG--VDVKDWVGRATLDVMA--LAG--FDYKSDSLQNKTNELVAFVGL 231
Db 153 ARCLVEITFGTEGRFPDPSLLLAQATSNVVCSLFLGLRFSYEDKEFQAVVRAAGTLLGV 212
Qy 232 TDGFAPTLDSFKALMWDVPVFRMKRHEIPL-----TQGLAVRRVGIELMEQKQAVL 287
Db 213 SSQGGQTYEMFS--W-----FLRLPGPHKQLLHHVSTLAAFTVRQV-----QOHQGNL 259
Qy 288 GSASDAQVDKQVQGRDILSLVLRANIAANLPESQ-----KLSDEVLQAISNLPAGYET 343
Db 260 -DAGSPARD-----LVDAFLKMAQEENQCTETFNKMLMTVIYLLPAGTWT 306
Qy 344 SSTVLTMFHLRSLSEKAVQDKLREIEICQIDTM-----PTLDELNALPYLEAFVKESLRL 398
Db 307 VSTTVGYTLJJLMKYPHVQKVVREE--LNRELGAQAPSLGDRTRLPYTDVAVLHEAQL 363
Qy 399 DPPSPYA-NRCLKDEDF-----IPLAEPIVGRDGSVINEVRITKGTVMWMLPLFNINRSKP 453
Db 364 LALVPMGIPRTLMRTTRFRGYTLPGQTEVFPLGLSILHDPNIFK----- 407
Qy 454 IYGEDAEFRPERWLEDVTDLSNSTEAPYHQAFISGPRACFGWRPAAVBAEMKAFLEVTLL 513
Db 408 ----HPESLGNDRFL-DADGRFRKHEA-----FLPFLSKGRVCLGEGKLAKELFLFFTTIL 458
Qy 514 RVOPEPIIHPYEHITLIISRPRIVGRREKGYQMRLOKRPVE 557
Db 459 QAFSLSESCP-PD-----TSL-LKPTVSGLFNIPPAFLQVLRPTD 496

RESULT 4
US-10-507-106-2
; Sequence 2, Application US/10507106
; Publication No. US20050246797A1
; GENERAL INFORMATION:
; APPLICANT: Japan Science and Technology Agency
; TITLE OF INVENTION: Gene participating in the synthesis of brassinosteroid
; FILE REFERENCE: 26352U (P03-311PCT)
; CURRENT APPLICATION NUMBER: US/10/507,106
; CURRENT FILING DATE: 2004-09-10
; NUMBER OF SEQ ID NOS: 6
; SOFTWARE: PatentIn version 3.1
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; SEQ ID NO 2
; LENGTH: 490
; TYPE: PRT
; ORGANISM: Arabidopsis thaliana
US-10-507-106-2

Query Match          5.0%; Score 143; DB 1; Length 490;
Best Local Similarity 18.6%; Pred. No. 5.5e-06;
Matches 105; Conservative 94; Mismatches 215; Indels 150; Gaps 21;

Qy 19 ASIATFSLYL-----APRRSSLYNLQGNHNTYF-----TCGNF 51
Db 5 SSSLFTSFFPFIIVIFNKLRRSSPASKKLNDDHHTVSQSHGPKFPHGSLGWPVIGET 64
Qy 52 LDILSARTGEHAKYREK-----YGSTIRFAGIAGAPVLNSTDPKVFNVHMKAYD----- 102
Db 65 IEFVSSAYSDRPESFMDKRLMYGRVFK-SHIFGTATIVSTDAEVNRVAVQSSTAFVPF 123
Qy 103 YPKPGMAARVLRATGDDVVTAEGEAHKKRHRIM-----IPSLSAQAVKSMVFIFLEKGM 157
Db 124 YPK-----TVRELKMGSSILLINGSLSHRRPHGLVGSFLKSPLLKQAIIVRDMHK-FLSESM 177
Qy 158 ELVDKWMEDAAEKDMVAGSAGEKKAIRLETEGVVDKDWVGRATLDVWALAGFDY-KSDS 216
Db 178 DLWS-----EDQPVLQDVSKTVAFKVLAKALISVEKGD 212
Qy 217 LQNKTNELVAFVGLTDGFAPTLDSFKALMWDVPVFRMKRHEIPLTQGLAVRRVGI 276
Db 213 LEEELKREFENFISGL-----MSLPINFFGTQ-LHRSLOAKK 247
Qy 277 ELMEQKQAVLGS-ASDAQVDKQVQGRDILSLVLRANIAANLPESOKLSDEEVLQAISN 335
Db 248 NMVKQVERIIEGKIRKTKNKEEDDVIKQDVVLLK-----DSSHLTHNLIANNMID 300
Qy 336 LLFAGYETSSTVLTWMPHRLSEDKAVQDKLREIEICQIDTDMPTLDELN-----AL 385
Db 301 MMIPGHDSVPVLTITLAVKFLSDSPAALNLLTKNM-----KLKSLKELTGEPPLYWNDYLSL 355
Qy 386 PYLEAFVKESLRLDPPSPYANRECLKDEDFIPLAEPIVGRDGSVINEVRITKGTVMWMLPL 445
Db 356 PLTQKVITETLRMGVNIIVGMKAMKQV-----IKGVIPKGCWCFLAYL 400
Qy 446 FNINRSKFIYGEDAEFRPERWLEDVTDLSNSTEAPYHQAFISGPRACFGWRPAAVBAEM 505
Db 401 RSVHLDDEAY-ESPKFNPNRWQE--RDMNTSSPSFPG-----GGORLCPGLDLARLET 451
Qy 506 KAFLEVTLLRRVQF-----EPIISHP 525
Db 452 SVFLHLVTRFRMTAEDDTIINPP 475

RESULT 5
US-10-957-569-28
; Sequence 28, Application US/10957569
; Publication No. US20050246785A1
; GENERAL INFORMATION:
; APPLICANT: COOK, Zhihong et al.
; TITLE OF INVENTION: PROMOTER, PROMOTER CONTROL ELEMENTS, AND COMBINATIONS, AND USES
; FILE REFERENCE: 2750-1577PUS3
; CURRENT APPLICATION NUMBER: US/10/957,569
; CURRENT FILING DATE: 2004-09-30
; PRIOR APPLICATION NUMBER: US 10/950,321
; PRIOR FILING DATE: 2004-09-23
; NUMBER OF SEQ ID NOS: 64
; SOFTWARE: PatentIn version 3.3
; SEQ ID NO 28
; LENGTH: 468
; TYPE: PRT
; ORGANISM: Arabidopsis thaliana
US-10-957-569-28

Query Match          5.0%; Score 142; DB 1; Length 468;
```


Db 337 DIYELFGSKDE--IDVSDY--IHKDQG--IVHVGKTLTYDFRFFHTDLKAF--- 388
Qy 512 TLRRVQPEPIISHPEY--EHTTLISRPRIVRGKEGYQMLQ-----VKPVE 557
Db 389 -----QSDIITIGGYMHEPNLQKDESI---DLEGYKFTLESIEQGFMRWFIVEPIK 439

RESULT 8
US-11-074-176-22
; Sequence 22, Application US/11074176
; Publication No. US20050250135A1
; GENERAL INFORMATION:
; APPLICANT: Klaenhammer, Todd R.
; APPLICANT: Russell, William M.
; APPLICANT: Altermann, Eric
; APPLICANT: McAuliffe, Olivia
; APPLICANT: Perill, Andrea Azcarate
; TITLE OF INVENTION: Nucleic Acid Sequences Encoding
; TITLE OF INVENTION: Stress-Related Proteins and Uses Therefore
; FILE REFERENCE: 5051-694
; CURRENT APPLICATION NUMBER: US/11/074,176
; CURRENT FILING DATE: 2005-03-07
; PRIOR APPLICATION NUMBER: 60/551,161
; PRIOR FILING DATE: 2004-03-08
; NUMBER OF SEQ ID NOS: 381
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 22
; LENGTH: 296
; TYPE: PRT
; ORGANISM: Lactobacillus acidophilus
US-11-074-176-22

Query Match 2.7%; Score 78; DB 7; Length 296;
Best Local Similarity 26.8%; Pred. No. 1.7;
Matches 57; Conservative 23; Mismatches 69; Indels 64; Gaps 13;
Qy 113 LRIATGCGVTTAEG---EAKHRRRIMPISLSAQAVKSMVPIFEKGMELVDKMWED--- 166
Db 15 LRLLT-----ITAKGVSVSAQKRHD--LWSASSAVLGRTLVGLSLLAGABLTDK--EELTV 66
Qy 167 -----AAEKDMVAGESAGEKKATRL-----ETEGVDVQWVGVRATLDVWALA 208
Db 67 RLLGNPVGPAIVATADLVK---KGYKNPHIALPPKENGHIDVKKVAGQGFVETKDL 123
Qy 209 GFDYKSDSLQNKTNELYVAFVGLTDFGAPTLDSFKAIMWDFVFPYRTWKRRHEIPLTQGL 268
Db 124 GL-----KEPYTGQVPVSG-----EIAEDFAYY---LTKSEQIPSAVGL 160
Qy 269 AV-----SRRVGHELMQKQAVLGSASDAQVDK 297
Db 161 SVFVNPNSIG-EAGGFMLQALPG-ASDALIDK 191

RESULT 9
US-10-467-962B-109
; Sequence 109, Application US/10467962B
; Publication No. US20050246784A1
; GENERAL INFORMATION:
; APPLICANT: Plesch, Gunnar
; APPLICANT: Blau, Astrid
; APPLICANT: Daeschner, Klaus
; APPLICANT: Klein, Mathieu
; TITLE OF INVENTION: Identification of Herbicidally Active Substances
; FILE REFERENCE: 2000 857
; CURRENT APPLICATION NUMBER: US/10/467,962B
; CURRENT FILING DATE: 2003-08-14
; PRIOR APPLICATION NUMBER: PCT/EP02/01466
; PRIOR FILING DATE: 2002-02-13
; NUMBER OF SEQ ID NOS: 109
; SOFTWARE: PatentIn Vers. 2.0
; SEQ ID NO 109
; LENGTH: 565
; TYPE: PRT

; ORGANISM: Arabidopsis thaliana
US-10-467-962B-109

Query Match 2.7%; Score 78; DB 1; Length 565;
Best Local Similarity 16.0%; Pred. No. 4.7;
Matches 56; Conservative 59; Mismatches 92; Indels 144; Gaps 17;
Qy 176 ESAGEKKATRL--ETEGVDVKD-----WVGRATLDVWALAG--FDYKS--DSLQNKTN 223
Db 273 KACSEKALRFGQVHSLVVRMIKTDVFGTSLMDMYAKGGEISDCRKFVDFGNSRNTV 332
Qy 224 LYVAFVG--LTDGFAPTLDSFKAIMWDFVFPYRTMKRHRHEIPLTQGLAVSRVVGIELMEQ 281
Db 333 TWTSLIAAHAREGFGE-----EASLSFRIMKRHR-----LIANNLTVELHAQ 374
Qy 282 KQAVLGSASDAQVDKQVQGRDILSLVPRANTANLPEQKLSDEEVLQISNLLFAGY 341
Db 375 -----IINKSIEKN-----VYIG- 387
Qy 342 ETSSTVLTWTFHRLSEDKAVQDKLREBICQIDTDMPTLD-----ELNAL 385
Db 388 -----STLVWLYCKGSGSDAFNVLQ-----LPSRDVSVWTAMISGCSLGHSEAL 435
Qy 386 PYLEAFVKESLRLDPPSPY-----ANRECLKDEDFIPLAEPVIGRD-----GSVINEVR 434
Db 436 DFLKEMIQEGVE---PNPFTYSSALKACANSESL-----IGRSIHSIAKKNHLSNVF 486
Qy 435 ITKGTVMVMLPLFNI-----NRSKFYIGDAEERFRERWL 468
Db 487 VGSALIHIMPEKNLVSWKAMIMGYARNGFCREALKLMYRMEAEQFEVDYI 537

RESULT 10
US-11-013-759-9
; Sequence 9, Application US/11013759
; Publication No. US20050249747A1
; GENERAL INFORMATION:
; APPLICANT: Loosmore, Sheena M.
; APPLICANT: Sasaki, Ken
; APPLICANT: Yang, Yan Ping
; APPLICANT: Klein, Michel H.
; TITLE OF INVENTION: RECOMBINANT HIGH MOLECULAR WEIGHT MAJOR OUTER MEMBRANE
; FILE OF INVENTION: PROTEIN OF MORAXELLA
; FILE REFERENCE: 1038-921MIS:1b
; CURRENT APPLICATION NUMBER: US/11/013,759
; CURRENT FILING DATE: 2004-12-16
; PRIOR APPLICATION NUMBER: US/09/361,619
; PRIOR FILING DATE: 1999-07-27
; NUMBER OF SEQ ID NOS: 32
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 9
; LENGTH: 2053
; TYPE: PRT
; ORGANISM: Moraxella catarrhalis
US-11-013-759-9

Query Match 2.7%; Score 78; DB 7; Length 2053;
Best Local Similarity 19.4%; Pred. No. 36;
Matches 71; Conservative 73; Mismatches 138; Indels 84; Gaps 18;
Qy 32 RSSLYNLQGNHTNYFT--GNFLDILSARTGBEHAKYREKYGSTLRFAGIAGAPVLN---- 86
Db 664 KTKLNSNGTSGNNKFSVSNADHNSLVAKDLADLYLNKVNNETADSA--LPSPFKVQNGDS 722
Qy 87 -----STDPKVFNHVMKEAYDPKPGMAARVLRIATG-----DGVVTAE---G 126
Db 723 NNATVVGKDTNGKTFNTLKLKG-----ENGVNITNR--ATGTVTFQIDQSNGLTTPKLVG 777
Qy 127 EAHKRRRIM--IPSLSAQAVKSMVPIFEKGMELVDKQMEDAAEKDMVAGESAGEKKAT 184
Db 778 SDTNGRLVIEQVPSADGNSTKNII-----KGLSTPLPSIASPSGRNLTAGNT----- 825
Qy 185 RLETEGVVDKQWVGVRATLDVWALAGFDYKSDSLQNKTNELYVAFVGLTDFGAPTLDSFKA 244

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Db      826  -----IEEKDKSNASIDDVLNAGFNKNGKDKDFVSYDTF-VDFIDGNATT-----AT 874
Qy      245  IMWDFVYPTMKRRRHEIPTQ-----GLAVRRRVGIELMEOKQAVLGASDAQVDKK 298
Db      875  VTYDEAN--QTSKVADVNVDETIETLTGNGKKQLGVKTIKLTETSTNGNATTFSTD-- 930
Qy      299  DVQGRDILSLVRANTAANLPSOKLSDEVLVAQISNLLFAGYETSSTVL-TWMFHRLSE 357
Db      931  -----DDHALVKASDIAGNL---NTLAEE-----IHTTKGTANTALQFTTKVKVDE 973
Qy      358  DKAVQD 363
Db      974  NDKADD 979

RESULT 11
US-11-074-176-348
; Sequence 348, Application US/11074176
; Publication No. US20050250135A1
; GENERAL INFORMATION:
; APPLICANT: Klaenhammer, Todd R.
; APPLICANT: Russell, William M.
; APPLICANT: Altermann, Eric
; APPLICANT: McAuliffe, Olivia
; APPLICANT: Peril, Andrea Azcarate
; TITLE OF INVENTION: Nucleic Acid Sequences Encoding
; FILE REFERENCE: 5051-694
; CURRENT APPLICATION NUMBER: US/11/074,176
; PRIOR FILING DATE: 2005-03-07
; PRIOR APPLICATION NUMBER: 60/551,161
; NUMBER OF SEQ ID NOS: 381
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 348
; LENGTH: 799
; TYPE: PRT
; ORGANISM: Lactobacillus acidophilus
US-11-074-176-348

Query Match      2.7%; Score 77; DB 7; Length 799;
Best Local Similarity 21.3%; Pred. No. 10;
Matches 94; Conservative 72; Mismatches 169; Indels 106; Gaps 24;

Qy 123 TAEGEAH-----KRHRIMIPSLSAQAVKSMVPIFLEKGMELVD--KMEDAAEK 170
Db 360 TAKGDQRMAMNPITNGGDKPKRLNLPYRNFAKFDKPGSV--AQDMVEWAKYLNEVAKL 418
Qy 171 DMAV--GESAGEKATRLTEGVGVK--DW---VGRATLDVMAAGFDYKSDSLQNKTNEL 224
Db 419 NPTTFRGFGPDESKNSRLFLKLLDDQKRQWEPEVHEPNENLAPSGRVIDSOLSEHQDEGF 478
Qy 225 YVAFVGLT--DGFAPTLDSF-----KATMWDVPVYFTMKR---RHEIPLTQGLAVS--- 271
Db 479 LEGYV-LTGRHGFPATYEAAGRVDVSMLTQHMKWLKAKEQYWRHDPYSLNFVATSTVPQ 537
Qy 272 -----RRVGI--ELMEQKQAVLGS--ASDQ-----AVDKQDVQGRDILSLVRANTA 315
Db 538 QDHNGYTHODPGILTHLYEKNRPDLVHEYLPSDTNTLLAVGNKAFTRDRCINVLVTSKQP 597
Qy 316 A----NLPESOKLSDEVLVAQIS-----NLLFAGYETSSTVL-TWMFHRLSEDKAV 361
Db 598 RPQWFSIEEAQKLVKDG--LSYIDWASTDKGVKPDIVFASSTETPTIETLAAIDILHDKFP 656
Qy 362 QDKLREICQIDTDMPTLDLNAFLYEAFFVKESRLDPPSPYANRECLKDEDFIPLAEP 421
Db 657 DLKIR-----YINVIDVWKL-----SPKDNKNGISDEEF-----DR 688
Qy 422 VIGRDSGVINEVRITKGTWMLPLFNIRSK---FIYGDAEEFRP-----ERWLE 469
Db 689 LFPKDVPIFAWHGYKSMMESI-WFARNRHNHVIHCYEENGDIITTFPDMRVNLHLDREF-D 746

RESULT 13
US-10-510-386-214
; Sequence 214, Application US/10510386
; Publication No. US2005024492A1
; GENERAL INFORMATION:
; APPLICANT: Andersen, Jens Tonne
```

```
Qy      470  DVTDSLNSIEAPYCHQASFIS 490
Db      747  LAKDAVESVDKLKGKNADFIS 767

RESULT 12
US-11-074-176-172
; Sequence 172, Application US/11074176
; Publication No. US20050250135A1
; GENERAL INFORMATION:
; APPLICANT: Klaenhammer, Todd R.
; APPLICANT: Russell, William M.
; APPLICANT: Altermann, Eric
; APPLICANT: McAuliffe, Olivia
; APPLICANT: Peril, Andrea Azcarate
; TITLE OF INVENTION: Nucleic Acid Sequences Encoding
; FILE REFERENCE: 5051-694
; CURRENT APPLICATION NUMBER: US/11/074,176
; CURRENT FILING DATE: 2005-03-07
; PRIOR APPLICATION NUMBER: 60/551,161
; PRIOR FILING DATE: 2004-03-08
; NUMBER OF SEQ ID NOS: 381
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 172
; LENGTH: 805
; TYPE: PRT
; ORGANISM: Lactobacillus acidophilus
US-11-074-176-172

Query Match      2.7%; Score 77; DB 7; Length 805;
Best Local Similarity 21.3%; Pred. No. 10;
Matches 94; Conservative 72; Mismatches 169; Indels 106; Gaps 24;

Qy 123 TAEGEAH-----KRHRIMIPSLSAQAVKSMVPIFLEKGMELVD--KMEDAAEK 170
Db 366 TAKGDQRMAMNPITNGGDKPKRLNLPYRNFAKFDKPGSV--AQDMVEWAKYLNEVAKL 424
Qy 171 DMAV--GESAGEKATRLTEGVGVK--DW---VGRATLDVMAAGFDYKSDSLQNKTNEL 224
Db 425 NPTTFRGFGPDESKNSRLFLKLLDDQKRQWEPEVHEPNENLAPSGRVIDSOLSEHQDEGF 484
Qy 225 YVAFVGLT--DGFAPTLDSF-----KATMWDVPVYFTMKR---RHEIPLTQGLAVS--- 271
Db 485 LEGYV-LTGRHGFPATYEAAGRVDVSMLTQHMKWLKAKEQYWRHDPYSLNFVATSTVPQ 543
Qy 272 -----RRVGI--ELMEQKQAVLGS--ASDQ-----AVDKQDVQGRDILSLVRANIA 315
Db 544 QDHNGYTHODPGILTHLYEKNRPDLVHEYLPSDTNTLLAVGNKAFTRDRCINVLVTSKQP 603
Qy 316 A----NLPESOKLSDEVLVAQIS-----NLLFAGYETSSTVL-TWMFHRLSEDKAV 361
Db 604 RPQWFSIEEAQKLVKDG--LSYIDWASTDKGVKPDIVFASSTETPTIETLAAIDILHDKFP 662
Qy 362 QDKLREICQIDTDMPTLDLNAFLYEAFFVKESRLDPPSPYANRECLKDEDFIPLAEP 421
Db 663 DLKIR-----YINVIDVWKL-----SPKDNKNGISDEEF-----DR 694
Qy 422 VIGRDSGVINEVRITKGTWMLPLFNIRSK---FIYGDAEEFRP-----ERWLE 469
Db 695 LFPKDVPIFAWHGYKSMMESI-WFARNRHNHVIHCYEENGDIITTFPDMRVNLHLDREF-D 752
Qy 470  DVTDSLNSIEAPYCHQASFIS 490
Db      753  LAKDAVESVDKLKGKNADFIS 773

RESULT 13
US-10-510-386-214
; Sequence 214, Application US/10510386
; Publication No. US2005024492A1
; GENERAL INFORMATION:
; APPLICANT: Andersen, Jens Tonne
```



```

; APPLICANT: Clausen, Ib Groth
; APPLICANT: Jorgensen, Steen Troels
; APPLICANT: Olsen, Peter Bjarke
; APPLICANT: Rasmussen, Michael Dolberg
; TITLE OF INVENTION: Improved Bacillus Host Cell
; FILE REFERENCE: 10294.204-US
; CURRENT APPLICATION NUMBER: US/10/510.386
; CURRENT FILING DATE: 2004-10-04
; NUMBER OF SEQ ID NOS: 248
; SOFTWARE: PatentIn version 3.3
; SEQ ID NO 214
; LENGTH: 702
; TYPE: PRT
; ORGANISM: Bacillus licheniformis
US-10-510-386-214

Query Match      2.7%; Score 76.5; DB 1; Length 702;
Best Local Similarity 20.4%; Pred. No. 9.1;
Matches 62; Conservative 41; Mismatches 90; Indels 111; Gaps 14;

Qy 143 QAVKSMVPIPLEKGMELVDKMDAAEKDMAGSAGEKKATRL-----ETEGVDV-KDW 196
Db 194 QIVKAMPKTAGKNDK---QLLDEKASKOMPANDLTVE-EVSRVSEHLEELPGVDVIMDW 249

Qy 197 VGRATLDMALAGFDYKSDSLQNKTNELVYAFVGLTDFGFAPTLDSFKAIMWDFVPIYRTM 256
Db 250 TRK-----YPYE-----KT--LYSIFGGVT-----TPEOGLI 274

Qy 257 KRRHEIPLTOGLAVSRVIGELMOKKQAVLGSDAQAVDKKQVQGRDILSLVRANIAA 316
Db 275 KQREDFLTRGYANDRVKSYLEYQVEEYLNPKKAKVQYTNESKVI----- 323

Qy 317 NLPESQKLSDEEVLAAQISNLLFAGYETSTVLTWTFHRLSDKAVQDKLREIICQIDTDM 376
Db 324 ----SQETVDEG-----RRGYDL-----QLTFDMLQKKVEEAI----- 353

Qy 377 PTLDELNALPYLEAFVKESLRDPPSPYANRECLKDEDFIPLAEP-----VIGRDSVINE 432
Db 354 --EEELN-----KFRGSNYMLDRAFYVMMDPNNGDILSMAGKRIVD 392

Qy 433 VRIT 436
Db 393 GKIT 396

RESULT 14
US-11-074-176-314
; Sequence 314, Application US/11074176
; Publication No. US20050250135A1
; GENERAL INFORMATION:
; APPLICANT: Klaenhammer, Todd R.
; APPLICANT: Russell, William M.
; APPLICANT: Altermann, Eric
; APPLICANT: McAuliffe, Olivia
; APPLICANT: Perill, Andrea Azcarate
; TITLE OF INVENTION: Nucleic Acid Sequences Encoding
; FILE REFERENCE: 5051-694
; CURRENT APPLICATION NUMBER: US/11/074,176
; CURRENT FILING DATE: 2005-03-07
; PRIOR APPLICATION NUMBER: 60/551,161
; NUMBER OF SEQ ID NOS: 381
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 314
; LENGTH: 746
; TYPE: PRT
; ORGANISM: Lactobacillus acidophilus
US-11-074-176-314

Query Match      2.7%; Score 76.5; DB 7; Length 746;
Best Local Similarity 19.6%; Pred. No. 10;
Matches 96; Conservative 76; Mismatches 175; Indels 143; Gaps 25;

Qy 43 HTNYFTGNFLDILSARTGEEHAKYRE--KYGSTLRFAGIAGAPVLNSTDPKVFNVHM--- 97
Db 343 HWAYKGNFNGVEATSSGKGLDMVRILELKDFTKQAG-----EFMKSVKSDIFSDRVYVF 398

Qy 98 ---KEAYDYPKPGMAARVLRIATGQGVVTAEGSAHKRHRIMTPISLSAQAVKSMVPI-FL 153
Db 399 TPKGEVVELPK-----GSVTLT-PAYAIHTQVGVSHAVGARVNNKLVLPLDYK 443

Qy 154 EKMELVDKQMED--AAEKDMA--VGESAGEKK-----ATRELET 188
Db 444 LRNGDVIETMTQNAAPSRDMDWMTKTSRARNKIRRYFRGQDREESIEHGEQMVANTIRD 503

Qy 189 EGVVDKDWGCRATLDMALAGFDYKSDSLQNKTNELVYAFVGLTDFGFAPTLDSFKAIMWD 248
Db 504 EGVLPKDFMDKEHIEKL-LEHFN-----NTSEELYAA-VGFGD----- 540

Qy 249 FVPYFRMTKRHRHEIPLTQGLAVSRVIGIELM-----EOKKQAVLG-----SASDAQVDDKDVQ 301
Db 541 -----LSAQAVVNRLTIDLRREDEKQKQKLEBEKILNSQQAIAKEBQPK 584

Qy 302 GRDILSLVPRANTAANLPESQKLSDEEV-LAQISNLL-----FAGYETSSVLTWTFHRLS 356
Db 585 KNSNSVMKVRKHNGVMI---QGVSDMLMLHLAKCCNPVPGDEIIIGYVTKRGVGT--IHR-T 638

Qy 357 EDKAVQDKLREIICQIDTDMPTLDELNALPY---LEAFVKESLRDPPSPYANRECLKDE 413
Db 639 DCRNITKEAEQGRLLDVEWENVEENNVQSFNANIEVF-----CYNRSNLLSD- 686

Qy 414 DFIPLAEPVIGRDSVINEVR-ITKGTVMVLPFLNRSKEIYGEDAEERFPERLWLSVDT 472
Db 687 -----VINKLSLTKNINNISGKVNDNIAHIVYVTV--VRNAKQLDEIL 729

Qy 473 DLSNLSIAPY 482
Db 730 SKLRDIPDVY 739

RESULT 15
US-11-074-176-54
; Sequence 54, Application US/11074176
; Publication No. US20050250135A1
; GENERAL INFORMATION:
; APPLICANT: Klaenhammer, Todd R.
; APPLICANT: Russell, William M.
; APPLICANT: Altermann, Eric
; APPLICANT: McAuliffe, Olivia
; APPLICANT: Perill, Andrea Azcarate
; TITLE OF INVENTION: Nucleic Acid Sequences Encoding
; FILE REFERENCE: 5051-694
; CURRENT APPLICATION NUMBER: US/11/074,176
; CURRENT FILING DATE: 2005-03-07
; PRIOR APPLICATION NUMBER: 60/551,161
; NUMBER OF SEQ ID NOS: 381
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 54
; LENGTH: 749
; TYPE: PRT
; ORGANISM: Lactobacillus acidophilus
US-11-074-176-54

Query Match      2.7%; Score 76.5; DB 7; Length 749;
Best Local Similarity 19.6%; Pred. No. 10;
Matches 96; Conservative 76; Mismatches 175; Indels 143; Gaps 25;

Qy 43 HTNYFTGNFLDILSARTGEEHAKYRE--KYGSTLRFAGIAGAPVLNSTDPKVFNVHM--- 97
Db 346 HWAYKGNFNGVEATSSGKGLDMVRILELKDFTKQAG-----EFMKSVKSDIFSDRVYVF 401

Qy 98 ---KEAYDYPKPGMAARVLRIATGQGVVTAEGSAHKRHRIMTPISLSAQAVKSMVPI-FL 153
Db 346 HWAYKGNFNGVEATSSGKGLDMVRILELKDFTKQAG-----EFMKSVKSDIFSDRVYVF 401
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OM protein - protein search, using sw model

Run on: November 21, 2005, 16:56:42 ; Search time 166 Seconds
(without alignments)

1401.994 Million cell updates/sec

Title: US-10-066-007A-1

Perfect score: 2852

Sequence: 1 MFILVLLTGALGLAFAFSNAS.....RIVGREKGYQMRLQVLPVE 557

Scoring table: BLOSUM62

Gapop 10.0 , Gapext 0.5

Searched: 1867569 seqs, 417829326 residues

Total number of hits satisfying chosen parameters: 1867569

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%

Maximum Match 100%

Listing first 45 summaries

Database :

Published Applications AA_Main.*
1: /cgn2_6/ptodata/1/pubpaa/US07_PUBCOMB.pep.*
2: /cgn2_6/ptodata/1/pubpaa/US08_PUBCOMB.pep.*
3: /cgn2_6/ptodata/1/pubpaa/US09_PUBCOMB.pep.*
4: /cgn2_6/ptodata/1/pubpaa/US10A_PUBCOMB.pep.*
5: /cgn2_6/ptodata/1/pubpaa/US10B_PUBCOMB.pep.*
6: /cgn2_6/ptodata/1/pubpaa/US11_PUBCOMB.pep.*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	ID	Description
1	2852	100.0	557	4	US-10-066-007-1
2	2852	100.0	557	4	US-10-066-007-3
3	419	14.7	595	5	US-10-751-235-33
4	399	14.0	504	5	US-10-804-772-24
5	398.5	14.0	503	4	US-10-313-963A-56
6	396.5	13.9	503	4	US-10-146-575-2
7	396.5	13.9	503	5	US-10-745-237-408
8	395.5	13.9	503	5	US-10-732-923-1079
9	394	13.8	485	5	US-10-690-991-2
10	394	13.8	485	5	US-10-833-296-2
11	394	13.8	485	5	US-10-516-338-8
12	394	13.8	485	6	US-11-076-967-2
13	392.5	13.8	543	4	US-10-425-115-294241
14	387.5	13.6	508	5	US-10-751-235-35
15	387	13.6	517	4	US-10-437-963-110700
16	387	13.6	523	4	US-10-437-963-157051
17	385.5	13.5	502	3	US-09-957-997-3
18	385	13.5	503	5	US-10-631-467-847
19	384.5	13.5	425	5	US-10-751-235-36
20	384.5	13.5	513	4	US-10-686-947-272
21	384.5	13.5	513	5	US-10-943-507-267
22	384.5	13.5	650	4	US-10-437-963-164419
23	384	13.5	537	4	US-10-425-114-38180
24	382	13.4	526	4	US-10-425-115-360975
25	381.5	13.4	527	4	US-10-425-115-233616
26	381	13.4	520	4	US-10-437-963-189675
27	380	13.3	529	4	US-10-425-115-209345

28 377.5 13.2 523 4 US-10-425-115-191779 Sequence 191779,
29 377.5 13.2 527 4 US-10-425-114-67055 Sequence 67055, A
30 377.5 13.2 579 5 US-10-751-235-38 Sequence 38, Appl
31 376.5 13.2 547 4 US-10-425-114-65616 Sequence 65616, A
32 374.5 13.1 461 5 US-10-686-947-176 Sequence 176, App
33 374.5 13.1 461 5 US-10-943-507-174 Sequence 224659,
34 372.5 13.1 528 4 US-10-425-115-224659 Sequence 169524,
35 371 13.0 516 4 US-10-437-963-169524 Sequence 216, App
36 370 13.0 521 4 US-10-686-947-216 Sequence 213, App
37 370 13.0 521 5 US-10-943-507-213 Sequence 184472,
38 368.5 12.9 523 4 US-10-437-963-184472 Sequence 61218, A
39 368.5 12.9 547 4 US-10-425-114-61218 Sequence 59349, A
40 368.5 12.9 560 4 US-10-425-114-59349 Sequence 59350, A
41 368.5 12.9 562 4 US-10-425-114-59350 Sequence 2, Appl
42 367 12.9 520 3 US-09-932-501-2 Sequence 264, App
43 367 12.9 521 4 US-10-686-947-264 Sequence 259, App
44 367 12.9 521 5 US-10-943-507-259 Sequence 174346,
45 367 12.9 525 4 US-10-437-963-174346

ALIGNMENTS

RESULT 1

US-10-066-007-1

; Sequence 1, Application US/10066007

; Publication No. US20030077691A1

; GENERAL INFORMATION:

; APPLICANT: HOSHINO, Tatsuo

; APPLICANT: OJIMA, Kazuyuki

; APPLICANT: SETOGUCHI, Yutaka

; TITLE OF INVENTION: ASTAXANTHIN SYNTHETASE

; FILE REFERENCE: ASTAXANTHIN SYNTHETASE

; CURRENT APPLICATION NUMBER: US/10/066,007

; CURRENT FILING DATE: 2001-02-01

; PRIOR APPLICATION NUMBER: US/09/518,386

; PRIOR FILING DATE: 2000-03-03

; PRIOR APPLICATION NUMBER: EP 99104668.1

; PRIOR FILING DATE: 1999-03-09

; PRIOR APPLICATION NUMBER: EP 00101666.6

; PRIOR FILING DATE: 2000-02-01

; NUMBER OF SEQ ID NOS: 32

; SOFTWARE: PatentIn Ver. 2.1

; SEQ ID NO 1

; LENGTH: 557

; TYPE: PRT

; ORGANISM: Phaffia rhodozyma

; FEATURE:

; NAME/KEY: TRANSIT

; LOCATION: (1)..(26)

US-10-066-007-1

Query Match 100.0%; Score 2852; DB 4; Length 557;
Best Local Similarity 100.0%; Pred. No. 5.2e-231;
Matches 557; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 MFILVLLTGALGLAFAFSWASIAFTSLYLAPRRSSLYNLQGNHTNYFTGNFLDILSARTG 60
DB 1 MFILVLLTGALGLAFAFSWASIAFTSLYLAPRRSSLYNLQGNHTNYFTGNFLDILSARTG 60
QY 61 EEHAKYREKYGSTLRFAGIAGAPVLNSTDPKVFNVHMKAEVDYDPKPGMAARVLRATG 120
DB 61 EEHAKYREKYGSTLRFAGIAGAPVLNSTDPKVFNVHMKAEVDYDPKPGMAARVLRATG 120
QY 121 VVTAGEAHKRRHRIIMIPSLSAQAVKSMVPIFLEKGMELVDKMMEDAAEKMAVGESAGE 180
DB 121 VVTAGEAHKRRHRIIMIPSLSAQAVKSMVPIFLEKGMELVDKMMEDAAEKMAVGESAGE 180
QY 181 KKAETLETGVDVQKDWVGRATLDVWALAGFDYKSDSLQNKTNELVYAVFGLTDGFAPTLD 240
DB 181 KKAETLETGVDVQKDWVGRATLDVWALAGFDYKSDSLQNKTNELVYAVFGLTDGFAPTLD 240
QY 241 SPKATMWDVFPVFTMRKRHEIPLTQGLAVSRVRVIELMEQKKQAVLGSASDAQVDKDV 300

```
Db 241 SFKAIMMDFVPYFRTMKRRHEIPIUTQGLAVSRRVGIEMEQKQAVLGASDAQVKKDV 300
Qy 301 QGRDILSLVRANAIANLPESQKLSDEEVLAIQISNLLFAGYETSSVLTWMFHLRSEDKA 360
Db 301 QGRDILSLVRANAIANLPESQKLSDEEVLAIQISNLLFAGYETSSVLTWMFHLRSEDKA 360
Qy 361 VQKLRBEICQIDTDMPTLDELNALPYLEAFVKESRLDPPSPYANRECLKDBDFIPLAE 420
Db 361 VQKLRBEICQIDTDMPTLDELNALPYLEAFVKESRLDPPSPYANRECLKDBDFIPLAE 420
Qy 421 PVIGRDSVINEVRITKGTWVMLPLFNINRSKFIYGEDAEERPERWLEVDVTDLSNSIEA 480
Db 421 PVIGRDSVINEVRITKGTWVMLPLFNINRSKFIYGEDAEERPERWLEVDVTDLSNSIEA 480
Qy 481 PYGHQASFISGPRACFGWRFAVAEMKAFLVTLRRVQFEPFIISHPEYEHITLIISRPV 540
Db 481 PYGHQASFISGPRACFGWRFAVAEMKAFLVTLRRVQFEPFIISHPEYEHITLIISRPV 540
Qy 541 GREKEGYQMLQVKPVE 557
Db 541 GREKEGYQMLQVKPVE 557
```

RESULT 2

US-10-066-007-3

; Sequence 3, Application US/10066007

; Publication No. US20030077691A1

; GENERAL INFORMATION:

; APPLICANT: HOSHINO, Tateuo

; APPLICANT: OJIMA, Kazuyuki

; TITLE OF INVENTION: ASTAXANTHIN SYNTHETASE

; FILE REFERENCE: ASTAXANTHIN SYNTHETASE

; CURRENT APPLICATION NUMBER: US/10/066.007

; CURRENT FILING DATE: 2001-02-01

; PRIOR APPLICATION NUMBER: US/09/518,386

; PRIOR FILING DATE: 2000-03-03

; PRIOR APPLICATION NUMBER: EP 99104668.1

; PRIOR FILING DATE: 1999-03-09

; PRIOR APPLICATION NUMBER: EP 00101666.6

; PRIOR FILING DATE: 2000-02-01

; NUMBER OF SEQ ID NOS: 32

; SOFTWARE: Patentin ver. 2.1

; SEQ ID NO 3

; LENGTH: 557

; TYPE: PRT

; ORGANISM: Phaffia rhodozyma

US-10-066-007-3

Query Match

Best Local Similarity 100.0%; Score 2852; DB 4; Length 557;

Matches 557; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

```
Qy 1 MFILVLLTGALGAAFSWASTAPPSLYLAPRRSLYNLQGNPHNTYETGNFLDILSARTG 60
Db 1 MFILVLLTGALGAAFSWASTAPPSLYLAPRRSLYNLQGNPHNTYETGNFLDILSARTG 60
Qy 61 EEHAKYREKYGSTLRFAGIAGAPVLNSTDPKVFNVHVMKEAYDYPKPGMAARVLRATGDG 120
Db 61 EEHAKYREKYGSTLRFAGIAGAPVLNSTDPKVFNVHVMKEAYDYPKPGMAARVLRATGDG 120
Qy 121 VVTAEGEAHKRRRIMIPSLISAQAVKSNVPIFLEKGMELVDKXMEDAAEKDMVAGESAGE 180
Db 121 VVTAEGEAHKRRRIMIPSLISAQAVKSNVPIFLEKGMELVDKXMEDAAEKDMVAGESAGE 180
Qy 181 KKATRLTEGVVDKDWGRATLDVMAAGFDYKSDSLQNKTNELVYAFVGLTDGFAPTLTLD 240
Db 181 KKATRLTEGVVDKDWGRATLDVMAAGFDYKSDSLQNKTNELVYAFVGLTDGFAPTLTLD 240
Qy 241 SFKAIMMDFVPYFRTMKRRHEIPIUTQGLAVSRRVGIEMEQKQAVLGASDAQVKKDV 300
Db 241 SFKAIMMDFVPYFRTMKRRHEIPIUTQGLAVSRRVGIEMEQKQAVLGASDAQVKKDV 300
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Qy 301 QGRDILSLVRANAIANLPESQKLSDEEVLAIQISNLLFAGYETSSVLTWMFHLRSEDKA 360
Db 301 QGRDILSLVRANAIANLPESQKLSDEEVLAIQISNLLFAGYETSSVLTWMFHLRSEDKA 360
Qy 361 VQKLRBEICQIDTDMPTLDELNALPYLEAFVKESRLDPPSPYANRECLKDBDFIPLAE 420
Db 361 VQKLRBEICQIDTDMPTLDELNALPYLEAFVKESRLDPPSPYANRECLKDBDFIPLAE 420
Qy 421 PVIGRDSVINEVRITKGTWVMLPLFNINRSKFIYGEDAEERPERWLEVDVTDLSNSIEA 480
Db 421 PVIGRDSVINEVRITKGTWVMLPLFNINRSKFIYGEDAEERPERWLEVDVTDLSNSIEA 480
Qy 481 PYGHQASFISGPRACFGWRFAVAEMKAFLVTLRRVQFEPFIISHPEYEHITLIISRPV 540
Db 481 PYGHQASFISGPRACFGWRFAVAEMKAFLVTLRRVQFEPFIISHPEYEHITLIISRPV 540
Qy 541 GREKEGYQMLQVKPVE 557
Db 541 GREKEGYQMLQVKPVE 557
```

RESULT 3

US-10-751-235-33

; Sequence 33, Application US/10751235

; Publication No. US20050150002A1

; GENERAL INFORMATION:

; APPLICANT: DellaPenna, Dean

; APPLICANT: Tian, Li

; APPLICANT: Kim, Joonyul

; TITLE OF INVENTION: Novel Carotenoid Hydroxylases for Use in Engineering Carotenoid

; FILE REFERENCE: Metabolism in Plants

; CURRENT APPLICATION NUMBER: US/10/751,235

; CURRENT FILING DATE: 2004-01-02

; NUMBER OF SEQ ID NOS: 74

; SOFTWARE: Patentin version 3.2

; SEQ ID NO 33

; LENGTH: 595

; TYPE: PRT

; ORGANISM: Arabidopsis thaliana

US-10-751-235-33

Query Match

Best Local Similarity 26.4%; Pred. No. 4e-26;

Matches 134; Conservative 95; Mismatches 179; Indels 100; Gaps 19;

```
Qy 50 NFLDILSARTG--EEHAKYREKYGST-----LRFAGI-----AGAPVLN 86
Db 95 NVLDPMFDWTGSDQDYPKYPEAKGSIQAVRNEAFFIPLYELFTYGGIFRLTFGPKSFLI 154
Qy 87 STDPKVFNVHMKE-AVDYPKPGMAARVLRATGDGVVTAEGSAHKHRRIMIPSLSAQAV 145
Db 155 VSDPSIAKHILKDNKAYSK-GILABILDVFMKGGLIPADGEIWRRRRAIVPALHQKYV 213
Qy 146 KSNVPFILEKGMELVDKXMEDAAEKDMVAGESAGEKKATLETEGVVDKDWGRATLDVDM 205
Db 214 AAMISLFGASDRLOCKL--DAA-----ALKEEVEEMESLFSRLTLDII 255
Qy 206 ALAGFDYKSDSLQNKTNELVYAFVGLTDGFAPTLTDSFKAIMMDFVPYFRTMKRRHEIPLT 265
Db 256 GKAVFNFDLSLNTDFTGVIEAVYTVLRREADRSVSPIP--VWD-IPWKDIS-----PRQ 307
Qy 266 QGLAVSRRVGIEMEQKQAVLGASDAQVKKDVQ-----GRD--ILSLVRANIAA 316
Db 308 RKVATSLKINDTLDD-----LIATCKRMVEEELQFHEEYMNERPDSILHFL----- 355
Qy 317 NLPESQKLSDEEVLAIQISNLLFAGYETSSVLTWMFHLRSEDKAVQDKLREETCQIDTD - 375
Db 356 -LASGDDVSQKLRDDLMTMLIAGHETSAVUTWTFTYLLTTTPSVVAKLQEEVDVSVIGDR 414
Qy 376 MPTLDELNALPYLEAFVKESRLDPPSPYANRECLKDBDFIPLAEPIGRDGSVINEVRI 435
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Db 415 FPTIQDMKKLYTTRVNNESLRLLPQPPVLRIRSI-----DNDILGEYPI 459
Qy 436 TKGTMVMLPLFNINRSKFIYGEDAEFRPRERWLEDVTD----SLNSTEAPYGHQASISG 491
Db 460 KRGEIDIFISVWNLHRSP-LHWDDAEKENPERWPLDGNPNETNQNFVLPFG-----GG 512
Qy 492 PRACFGWRFAVAEMKAFVTLRRVQFE 519
Db 513 PRKICGDMFASFENVVAIAMLIRRFNFQ 540

RESULT 4

US-10-804-772-24
; Sequence 24, Application US/10804772
; Publication No. US20040244077A1
; GENERAL INFORMATION:
; APPLICANT: Azpiroz, Ricardo
; APPLICANT: Choe, Sungchwa
; APPLICANT: Feldmann, Kenneth A.
; TITLE OF INVENTION: DMF4 POLYNUCLEOTIDES, POLYPEPTIDES AND USES THEREOF
; FILE REFERENCE: 11696-070001
; CURRENT APPLICATION NUMBER: US/10/804,772
; PRIOR FILING DATE: 2004-03-18
; PRIOR APPLICATION NUMBER: US/09/502,426
; PRIOR FILING DATE: 2000-02-11
; PRIOR APPLICATION NUMBER: US 60/119,657
; PRIOR FILING DATE: 1999-02-11
; PRIOR APPLICATION NUMBER: US 60/119,658
; PRIOR FILING DATE: 1999-02-11
; NUMBER OF SEQ ID NOS: 30
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 24
; LENGTH: 504
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-804-772-24

Query Match 14.0%; Score 399; DB 5; Length 504;
Best Local Similarity 28.4%; Pred. No. 1.5e-24;
Matches 156; Conservative 83; Mismatches 182; Indels 128; Gaps 24;
Qy 13 LAAPSW--ASTAFFSLYLAPRRS--SLYNLQG--PNHTNY--FTGNFLDILSARTG-----E 61
Db 7 LAMETWLLAVSLVLLYLYGTHSHGLFKKLGIPGTPLPFLGN---ILSYHKGFQCFMDE 63
Qy 62 EHAKYREKYGSTLRFAGIAGAPVLNSTDPKVFNNHYM--KEAYD-----YKPGMAARVL 113
Db 64 CHKYKGVWGF---YDG--QQPVLAITDPMIKLVKKECYSVFTNRPPFGVGPMSAI 118
Qy 114 RIATGDVVTAEGEAHKHRRIMIPSLSAQAVKSVPIFLEKGMELVDKMDAAEKDWA 173
Db 119 SI-----ABDEEWKRLRLSPTFTSGKLKENVPITIAQYGDVLRNLRRE----- 163
Qy 174 VCESAGEKATLET-EGVDVKDWVGRATLDVMALAGFDYKSDSLQNKTNELNYVAFVGLTD 233
Db 164 -----RETGKPVTLKDFGAYSMGVITSSFGVNDVSLNPD----- 201
Qy 234 GPAPTLDSPKAIM-WDFV-PYFRTMK--RRHEIPLTQGL-----AVSRVVG 275
Db 202 ---PLVENTKLLRFDLDPFLSITVPPFLIPILEVLNICVFPREVTNFLRKAVRME 258
Qy 276 IELMOKKQAVLGASDQAVKDDVQGRDILSLVRANITANLPSQK--LSDEEVLAQIS 334
Db 259 SRLEDTQKHRV-----DFLQIMDSHKNSKETESHKALSDELEVAQSI 301
Qy 335 NLLFAGYETSSVTLTWMFHLSEDKAVQDKLREEICQI--DTDMPTLDELNALPYLEAFV 392
Db 302 IFIFAGYETTSVLSIFIMYELATHPDVQKQEEIDAVLPNKAPPTYDTVLQMSYLDVVV 361
Qy 393 KESLRDPPSPYANRECLDEDFIPLAEPVIGRDSGVINEVRITKGTWVMLPLFNINRSK 452
Db 362 NETLRLFPFAMRLERVKKQDVE-----INGMFI PKGVVVMIPSYALHRDP 406

Qy 453 FIYGEDAEFRPRERWLEDVTDLSNS-TEAPYGHQASISGPRACFGWRFAVAEMKAFV 511
Db 407 -KWTPEPEKFLPERFSKONKNDIPYIYTPFG-----SGPRNCIGRFFALMNMKALIR 459
Qy 512 TLRRVQFEP 520
Db 460 VLQNFSPKP 468
RESULT 5
US-10-313-963A-56
; Sequence 56, Application US/10313963A
; Publication No. US2004002078A1
; GENERAL INFORMATION:
; APPLICANT: Boutell, Jonathan
; APPLICANT: Godber, Benjamin
; APPLICANT: Hart, Darren
; APPLICANT: Blackburn, Jonathan
; TITLE OF INVENTION: Arrays
; FILE REFERENCE: KIL-001
; CURRENT APPLICATION NUMBER: US/10/313,963A
; CURRENT FILING DATE: 2003-06-19
; PRIOR APPLICATION NUMBER: US 60/335,806
; PRIOR FILING DATE: 2001-12-05
; PRIOR APPLICATION NUMBER: US 60/410,815
; PRIOR FILING DATE: 2002-09-16
; NUMBER OF SEQ ID NOS: 60
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 56
; LENGTH: 503
; TYPE: PRT
; ORGANISM: Homo Sapiens
US-10-313-963A-56

Query Match 14.0%; Score 398.5; DB 4; Length 503;
Best Local Similarity 28.7%; Pred. No. 1.7e-24;
Matches 153; Conservative 88; Mismatches 195; Indels 97; Gaps 24;
Qy 13 LAAPSW--ASTAFFSLYLAPRRS--SLYNLQG--PNHTNY--FTGNFLDILSARTG-----E 61
Db 7 LAMETWLLAVSLVLLYLYGTHSHGLFKKLGIPGTPLPFLGN---ILSYHKGFQCFMDE 63
Qy 62 EHAKYREKYGSTLRFAGIAGAPVLNSTDPKVFNNHYM--KEAYD---PKPGMAARVLRIAT 117
Db 64 CHKYKGVWGF---YDG--QQPVLAITDPMIKLVKKECYSVFTNRPPFGVGPMSA- 117
Qy 118 GDGVVTAEGEAHKHRRIMIPSLSAQAVKSVPIFLEKGMELVDKMDAAEKDVAECES 177
Db 118 ---ISIAEDEEWKRLRLSPTFTSGKLKENVPITIAQYGDVLRNLRREA----- 164
Qy 178 AGEKATLET-EGVDVKDWVGRATLDVMALAGFDYKSDSLQNKTNELNYVAFVGLTDGFA 236
Db 165 -----ETGKPVTLKDFGAYSMGVITSTSGVNDVSLNPD----- 201
Qy 237 PTLDSFKAIM-WDFV-PYFRTMK--RRHEIPLTQGLAV---SRRVGIELMOKKQAVLGSA 290
Db 202 PFVENTKLLRFDLDPFLSITVPPFLIPILEVLNICVFPREVTNFLRKSVKR-----M 256
Qy 291 SDQAVDKDQVGRDILSLVRANITANLPSQKLSDEEVLAQISNLLFAGYETSTVLTW 350
Db 257 KESRLEDTQKHRVDFLQIMDSQNSKETESHKALSDELEVAQSIIFIFAGYETTSVLSF 316
Qy 351 MFHLSEDKAVQDKLREEICQI--DTDMPTLDELNALPYLEAFVKESSLRLDPPSPYANRE 408
Db 317 IMYELATHPDVQKQEEIDAVLPNKAPPTYDTVLQMSYLDVVVNETLRLFIANRLERV 376
Qy 409 CLKDEDFIPLAEPVIGRDSGVINEVRITKGTWVMLPLFNINRSKFIYGEDAEFRPERWL 468
Db 377 CKKQDVE-----INGMFI PKGVVVMIPSYALHRDP--KYWTEPEKFLPERFS 420
Qy 469 EDVTDLSNS-TEAPYGHQASISGPRACFGWRFAVAEMKAFVTLRRVQFEP 520
Db 421 KKNKNDIPYIYTPFG-----SGPRNCIGRFFALMNMKALIRVLQNFSPKP 467

RESULT 6
 US-10-146-575-2
 ; Sequence 2, Application US/10146575
 ; Publication No. US20030059800A1
 ; GENERAL INFORMATION:
 ; APPLICANT: Lichter, Jay
 ; APPLICANT: Guido, Marco
 ; TITLE OF INVENTION: GENOTYPING OF HUMAN CYP3A4
 ; FILE REFERENCE: SEQ-12P
 ; CURRENT APPLICATION NUMBER: US/10/146,575
 ; PRIOR FILING DATE: 2002-05-14
 ; PRIOR APPLICATION NUMBER: US/09/144,367
 ; PRIOR FILING DATE: 1998-08-31
 ; NUMBER OF SEQ ID NOS: 58
 ; SOFTWARE: FastSeq for Windows Version 3.0
 ; SEQ ID NO 2
 ; LENGTH: 503
 ; TYPE: PRT
 ; ORGANISM: H. sapiens
 ; OTHER INFORMATION: P08684
 US-10-146-575-2

Query Match 13.9%; Score 396.5; DB 4; Length 503;
 Best Local Similarity 28.7%; Pred. No. 2.5e-24;
 Matches 153; Conservative 88; Mismatches 195; Indels 97; Gaps 24;

QY	13	LAAFSW--ASIAFFSLYLAPRRS--SLYNLQG--PNHTNY--FTGNFLDILSARTG-----E 61
DB	7	LAMETWLLLAVALSVLLYLGYTHSHGLFKKLGIPGTPPLPFLGN---ILSYHKGFCMFDE 63
QY	62	EHAKYREKYGSTLRFAGIAGAPVLNSTDPKVFNHVM--KEAYDY---PKPGMAARVLRIAT 117
DB	64	CHKYKGVWGF---YDG--QQPVLAITDPMIKTVLVEKCVSVFTNRRPFGVGMKSA- 117
QY	118	GDGVVTAEGEAHKHRRIMIPSLSAQAVKSMVPIFLEKGMELVDKMMEDAAEKDMVAGES 177
DB	118	---ISIADEEEMKRLSLSPFTSGKLKEMVPIIAQYGDVLVRLNREA----- 164
QY	178	AGEKKAATLET--EGVDVKDWVGRATLDVNALAGFDYKSDSLQNKTNELYVAFVGLTDGFA 236
DB	165	-----ETGKPVTLKDVFGAYSMDVITSTSGVNIIDSLNNPD----- 201
QY	237	PTLDSFKAIM-WDFV-PYFRTMK--RRHEIPLTQGLAV---SRRVGIELMEQKQAVLGSA 290
DB	202	PFVENTKKLLRFDLDPFPLSITVPFPIPLEVLINICVFPREVTFNRKSVKR-----M 256
QY	291	SDQAVDKDVQGRDILSLVLRANIAANLPESOKLSDEEVLQAQISNLLFAGYETSSVLTW 350
DB	257	KESRLDQTKHRVDFQLMIDSONSKETESHKALSDELVAQSIIPIFAGYETSSVLSF 316
QY	351	MFHRLSEDKAVQDKLREEICQI--DTDMPTLDELNALPYLEAFVKESLRLDPPSPYANRE 408
DB	317	IMYELATHPDVQQLQEEIDAVALPNKAPPTYDTVLQMEYLDVMVNETLRLFPPIAMRLERV 376
QY	409	CLKDEDFILAEPVIGROGSVINEVRITKGTWMLPLFNINRSKFIYGEDAEAEFRPRWL 468
DB	377	CKKQVE-----INGMFIKGVWVWIPSYALHRDP--KYWTEPEKFLPERFS 420
QY	469	EDVTDLSNS--IEAPYGHQASFISSPRACFGWRFAVAEMKAFLFVTLRRVQFEP 520
DB	421	KKNKDNIDPIYITPFG-----SGPRNCIGRMFALMNMKALIRVLQNFSPKP 467

RESULT 7
 US-10-745-237-408
 ; Sequence 408, Application US/10745237
 ; Publication No. US20050227301A1
 ; GENERAL INFORMATION:
 ; APPLICANT: Cyclacel Limited
 ; APPLICANT: Glover, David
 ; APPLICANT: Bell, Graham
 ; APPLICANT: Frenz, Lisa

Query Match 13.9%; Score 396.5; DB 5; Length 503;
 Best Local Similarity 28.7%; Pred. No. 2.5e-24;
 Matches 153; Conservative 88; Mismatches 195; Indels 97; Gaps 24;

QY	13	LAAFSW--ASIAFFSLYLAPRRS--SLYNLQG--PNHTNY--FTGNFLDILSARTG-----E 61
DB	7	LAMETWLLLAVALSVLLYLGYTHSHGLFKKLGIPGTPPLPFLGN---ILSYHKGFCMFDE 63
QY	62	EHAKYREKYGSTLRFAGIAGAPVLNSTDPKVFNHVM--KEAYDY---PKPGMAARVLRIAT 117
DB	64	CHKYKGVWGF---YDG--QQPVLAITDPMIKTVLVEKCVSVFTNRRPFGVGMKSA- 117
QY	118	GDGVVTAEGEAHKHRRIMIPSLSAQAVKSMVPIFLEKGMELVDKMMEDAAEKDMVAGES 177
DB	118	---ISIADEEEMKRLSLSPFTSGKLKEMVPIIAQYGDVLVRLNREA----- 164
QY	178	AGEKKAATLET--EGVDVKDWVGRATLDVNALAGFDYKSDSLQNKTNELYVAFVGLTDGFA 236
DB	165	-----ETGKPVTLKDVFGAYSMDVITSTSGVNIIDSLNNPD----- 201
QY	237	PTLDSFKAIM-WDFV-PYFRTMK--RRHEIPLTQGLAV---SRRVGIELMEQKQAVLGSA 290
DB	202	PFVENTKKLLRFDLDPFPLSITVPFPIPLEVLINICVFPREVTFNRKSVKR-----M 256
QY	291	SDQAVDKDVQGRDILSLVLRANIAANLPESOKLSDEEVLQAQISNLLFAGYETSSVLTW 350
DB	257	KESRLDQTKHRVDFQLMIDSONSKETESHKALSDELVAQSIIPIFAGYETSSVLSF 316
QY	351	MFHRLSEDKAVQDKLREEICQI--DTDMPTLDELNALPYLEAFVKESLRLDPPSPYANRE 408
DB	317	IMYELATHPDVQQLQEEIDAVALPNKAPPTYDTVLQMEYLDVMVNETLRLFPPIAMRLERV 376
QY	409	CLKDEDFILAEPVIGROGSVINEVRITKGTWMLPLFNINRSKFIYGEDAEAEFRPRWL 468
DB	377	CKKQVE-----INGMFIKGVWVWIPSYALHRDP--KYWTEPEKFLPERFS 420
QY	469	EDVTDLSNS--IEAPYGHQASFISSPRACFGWRFAVAEMKAFLFVTLRRVQFEP 520
DB	421	KKNKDNIDPIYITPFG-----SGPRNCIGRMFALMNMKALIRVLQNFSPKP 467

RESULT 8
 US-10-732-923-1079
 ; Sequence 1079, Application US/10732923
 ; Publication No. US20050108791A1
 ; GENERAL INFORMATION:
 ; APPLICANT: Edgerton, Michael D
 ; TITLE OF INVENTION: TRANSGENIC PLANTS WITH IMPROVED PHENOTYPES
 ; FILE REFERENCE: 38-15(52796)C
 ; CURRENT APPLICATION NUMBER: US/10/732,923
 ; CURRENT FILING DATE: 2003-12-10
 ; PRIOR APPLICATION NUMBER: 10/310,154
 ; PRIOR FILING DATE: 2002-12-04
 ; NUMBER OF SEQ ID NOS: 24149

Query Match 13.9%; Score 396.5; DB 5; Length 503;
 Best Local Similarity 28.7%; Pred. No. 2.5e-24;
 Matches 153; Conservative 88; Mismatches 195; Indels 97; Gaps 24;

QY	13	LAAFSW--ASIAFFSLYLAPRRS--SLYNLQG--PNHTNY--FTGNFLDILSARTG-----E 61
DB	7	LAMETWLLLAVALSVLLYLGYTHSHGLFKKLGIPGTPPLPFLGN---ILSYHKGFCMFDE 63
QY	62	EHAKYREKYGSTLRFAGIAGAPVLNSTDPKVFNHVM--KEAYDY---PKPGMAARVLRIAT 117
DB	64	CHKYKGVWGF---YDG--QQPVLAITDPMIKTVLVEKCVSVFTNRRPFGVGMKSA- 117
QY	118	GDGVVTAEGEAHKHRRIMIPSLSAQAVKSMVPIFLEKGMELVDKMMEDAAEKDMVAGES 177
DB	118	---ISIADEEEMKRLSLSPFTSGKLKEMVPIIAQYGDVLVRLNREA----- 164
QY	178	AGEKKAATLET--EGVDVKDWVGRATLDVNALAGFDYKSDSLQNKTNELYVAFVGLTDGFA 236
DB	165	-----ETGKPVTLKDVFGAYSMDVITSTSGVNIIDSLNNPD----- 201
QY	237	PTLDSFKAIM-WDFV-PYFRTMK--RRHEIPLTQGLAV---SRRVGIELMEQKQAVLGSA 290
DB	202	PFVENTKKLLRFDLDPFPLSITVPFPIPLEVLINICVFPREVTFNRKSVKR-----M 256
QY	291	SDQAVDKDVQGRDILSLVLRANIAANLPESOKLSDEEVLQAQISNLLFAGYETSSVLTW 350
DB	257	KESRLDQTKHRVDFQLMIDSONSK

```
; SEQ ID NO 1079
; LENGTH: 503
; TYPE: PRT
; ORGANISM: Macaca fascicularis
US-10-732-923-1079

Query Match      13.9%; Score 395.5; DB 5; Length 503;
Best Local Similarity 28.6%; Pred. No. 3e-24;
Matches 155; Conservative 85; Mismatches 187; Indels 115; Gaps 26;

Qy 13 LAAFSW--ASIAFSLYLAPRS--SLYNLQ--PNHTNY--FTGNFLDILSARTG-----E 61
Db 7 LAVETWLLAVTLVLLYLYGTHSHGLPKLGIPTPLPLGN---ILSYRKGFWTDM 63
Qy 62 EHAKYREKYGSTLRPAGIAGAPVLNSTDPKVFNVHM--KEAYD-----YKPGMAARVL 113
Db 64 CYKYGKVGWGF---YDG--RQVLAIITDPNMIKTVLVKECYSVFTNRRPFGVGMKNAI 118
Qy 114 RIATGCVVTAEGEAHKKHRRIMIPSLSAQAVKSMVPIFEKGMELVDKXMDAAEKDMA 173
Db 119 SI-----AEDEEWKIRSLGPTFTSGKLKEMVPIIAKYGDVLRNLREA----- 164
Qy 174 VGESAGEKKATRLT-EGVDVKDWVGRATLDVMAAGFDYKSDSLQNKTNELNYVAFVGLT 232
Db 165 -----ETGKPVTLKDVFGAYSMVITSTSGVNIIDSLNPNQD----- 201
Qy 233 DGFAPTLDSFKAIM-WDFV-PYFRMK-RRHEIPLTOGLAVS---RRVGIEMLSOKKQAV 286
Db 202 ---PFVENTKLLRFDFLDPFFLSITTFPIIPILEVNIISIPPREVTSFLRSVKRI- 256
Qy 287 LGSASDAQVDKQVGR--DILSLVRANIANLPSOKLSDEEVLQAISNLLFAGYETS 344
Db 257 -----KESRLKDTQKRVDFLQMLIDSONSKETESHKALSDELVVAOSIIFAGYETT 310
Qy 345 STVLTMFHLRSEDKAVODKLRRETCQIDTDM-----PTLDELNALPYLEAFVKSRLD 399
Db 311 SSVLSFIYELATHPDVQKQEE---IDTVLPNKAPTDTVLQMEYLDVNVNETLRF 367
Qy 400 PPSYANRECLKDEDFIPLAEVPIGRDGSVINEVRITKGTWMLPLFNIRSKFIYGDA 459
Db 368 PIAMLERVCKDVE-----INGFIPIKGVVVMIPSYALHHP-KYWPEP 411
Qy 460 BEFRERWLEDVTDLSN-IEAPYGHQAFISGPRACGWFPAVAKMAFLVTLRRVQF 518
Db 412 EKFLPERFSKNNNDIDPIYTPFG-----SGPRNCIGMRPALNMKLAIRVQLNFSF 465
Qy 519 EP 520
Db 466 KP 467

RESULT 9
US-10-690-991-2
; Sequence 2, Application US/10690991
; Publication No. US200404024319A1
; GENERAL INFORMATION:
; APPLICANT: Tickle, Ian J
; APPLICANT: Vonrhein, Clemens
; APPLICANT: Williams, Pamela A
; APPLICANT: Jhoti, Harren
; APPLICANT: Kirtton, Stewart Brian
; TITLE OF INVENTION: Crystal structure of cytochrome P450
; FILE REFERENCE: 620-282
; CURRENT APPLICATION NUMBER: US/10/690,991
; CURRENT FILING DATE: 2004-04-13
; PRIOR APPLICATION NUMBER: US 60/421,063
; PRIOR FILING DATE: 2002-10-25
; PRIOR APPLICATION NUMBER: PCT/GB02/02668
; PRIOR FILING DATE: 2002-05-30
; PRIOR APPLICATION NUMBER: US 10/221,036
; PRIOR FILING DATE: 2002-04-02
; PRIOR APPLICATION NUMBER: US 60/479,448
; PRIOR FILING DATE: 2003-06-19
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; NUMBER OF SEQ ID NOS: 6
; SOFTWARE: Patentin version 3.1
; SEQ ID NO 2
; LENGTH: 485
; TYPE: PRT
; ORGANISM: Artificial sequence
; FEATURE:
; OTHER INFORMATION: Human 3A4 P450 protein truncated in its N-terminal region to
; delete the hydrophobic trans-membrane domain, and the region
; OTHER INFORMATION: replaced by a short N-terminal sequence.
US-10-690-991-2

Query Match      13.8%; Score 394; DB 5; Length 485;
Best Local Similarity 28.7%; Pred. No. 3.8e-24;
Matches 142; Conservative 83; Mismatches 177; Indels 92; Gaps 20;

Qy 47 FTGNFLDILSARTG-----EEHAKYREKYGSTLRPAGIAGAPVLNSTDPKVFNVHM-KE 99
Db 24 FLGN---ILSVHKGFCDMECHKYKVGWGF---YDG--QOPVLAITDPDMIKTVLVKE 75
Qy 100 AYDY---PKPGMAARVLRIATGCVVTAEGEAHKKHRRIMIPSLSAQAVKSMVPIFEK 156
Db 76 CYSVFTNRRPFGVGMKSA-----ISIAEDEEWKRLRSLSPFTTSKLEKEMVPIIAQY 131
Qy 157 MELVDKXMDAAEKDMAVGESAGEKKATRLT-EGVDVKDWVGRATLDVMAAGFDYKSD 215
Db 132 DVLVRNLREA-----ETGKPVTLKDVFGAYSMVITSTSGVNIID 172
Qy 216 SLQNKTNELNYVAFVGLTDFGAPTLDSFKAIM-WDFV-PYFRMK-RRHEIPLTOGLAV-- 270
Db 173 SLNPNQD-----PFVENTKLLRFDFLDPFFLSITTFPIIPILEVNIISIPPREVTSFL 218
Qy 271 -SRVGIEMLSOKKQAVLGSASDAQVDKQVGRDILSLVRANIANLPSOKLSDEE 329
Db 219 FPREVTNFLRSKVR-----MKSRLEDQTKGRVDFLQMLIDSONSKETESHKALSDE 273
Qy 330 LAQISNLLFAGYETSSTVLTMFHLRSEDKAVODKLRRETCQI---DTPMTPLDELNALPY 387
Db 274 VAQSIIFAGYETTSVLSFIMYELATHPDVQKQEEIDAVLPNKAPTDTVLQMEY 333
Qy 388 LEAFVKSRLDPPSPYANRECLKDEDFIPLAEVPIGRDGSVINEVRITKGTWMLPLFN 447
Db 334 LDMVNETLRFPIAMLERVCKDVE-----INGMFIPIKGVVVMIPSYA 378
Qy 448 INRSKFYIGEDAEEFRERWLEDVTDLSN-IEAPYGHQAFISGPRACGWFPAVAKMA 506
Db 379 LHRDP-KYWTPEKFLPERFSKNNNDIDPIYTPFG-----SGPRNCIGMRPALNMK 431
Qy 507 AFLFVTLRRVQFEP 520
Db 432 LALIRVQLNFSFKP 445

RESULT 10
US-10-833-296-2
; Sequence 2, Application US/10833296
; Publication No. US20050032119A1
; GENERAL INFORMATION:
; APPLICANT: Tickle, Ian J
; APPLICANT: Vonrhein, Clemens
; APPLICANT: Vinkovic, Dijana M
; APPLICANT: Kirtton, Stewart
; APPLICANT: Williams, Pamela A
; APPLICANT: Jhoti, Harren
; APPLICANT: Whittam, Harren
; TITLE OF INVENTION: Crystal Structure of Cytochrome P450
; FILE REFERENCE: 620-305
; CURRENT APPLICATION NUMBER: US/10/833,296
; CURRENT FILING DATE: 2004-04-28
; PRIOR APPLICATION NUMBER: GB 0108214.8
; PRIOR FILING DATE: 2001-04-02
; PRIOR APPLICATION NUMBER: GB 0108212.2
; PRIOR FILING DATE: 2001-04-02
; PRIOR APPLICATION NUMBER: US 60/479,448
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; PRIOR FILING DATE: 2003-06-19
; PRIOR APPLICATION NUMBER: US 60/421,063
; PRIOR FILING DATE: 2002-10-25
; PRIOR APPLICATION NUMBER: US 60/306,873
; PRIOR FILING DATE: 2001-07-23
; PRIOR APPLICATION NUMBER: US 60/306,874
; PRIOR FILING DATE: 2001-07-23
; PRIOR APPLICATION NUMBER: US 10/690,991
; PRIOR FILING DATE: 2003-10-23
; PRIOR APPLICATION NUMBER: US 10/221,036
; PRIOR FILING DATE: 2002-04-02
; PRIOR APPLICATION NUMBER: PCT/GB02/02668
; PRIOR FILING DATE: 2002-05-30
; NUMBER OF SEQ ID NOS: 6
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 2
; LENGTH: 485
; TYPE: PRT
; ORGANISM: Artificial sequence
; FEATURE:
; OTHER INFORMATION: Human 3A4 P450 protein truncated in its N-terminal region
; OTHER INFORMATION: to delete the hydrophobic trans-membrane domain, and the
; OTHER INFORMATION: region replaced by a short N-terminal sequence.
US-10-833-296-2

Query Match 13.8%; Score 394; DB 5; Length 485;
Best Local Similarity 28.7%; Pred. No. 3.8e-24;
Matches 142; Conservative 83; Mismatches 177; Indels 92; Gaps 20;
QY 47 FTGNFLDILSARTG-----BEHAKYREKYGSTLRFAGIAGAPVLNSTDPKVFNVHM-KE 99
Db 24 FLGN---ILSYHKGFDMFMECHKYKVGWGF---YDG--QQPVLAITDPDMIKTVLVE 75
QY 100 AYDY---PKPGMAARVLRIATGDGVTVAEGEAHRRHIMIPSLSAQAQVKSMPVIFLEKG 156
Db 76 CYSVFTNRRPFGPGVGMKSA-----ISIAEDBEWKRLSLSPFTSGKLKEMVPIIAQYG 131
QY 157 MELVDKMMEDAAEKDMVAGESAGEKKATRLT-EGVDVKDWVGRATLDVMAAGFDYKSD 215
Db 132 DVLVRLNRREA-----ETGKPVTLKDVFGAYSMDVITSTSGVNIID 172
QY 216 SLQNKTNELVAFVGLTGDGFAPTLDSFKAIM-WDFV-PYFRMK-RRHEIPLTQGLAV-- 270
Db 173 SLNNPQD-----PFVENTKLLRFDLPDFLSITVPFPLIPLEVLNICV 218
QY 271 -SRRVGIELMEQKQAVLGSASDAQVDKQVQGRDILSLVRANIAANLPSQKLSDEEV 329
Db 219 FPREVTFLRKSVKR-----MKESRLDTQKHRVDFLQLMIDSONSKETESHKALSDEL 273
QY 330 LAQISNLLPAGYETSTVLTWTFHRLSEDKAVQDKLREEICQI--DTDMPTLDLNLALPY 387
Db 274 VAQSIIIFAGYETTSVLSFIMYELATHPDVQVKLQEEIDAVLPNKAPPTYDTVLQMEY 333
QY 388 LEAFVKESLRLDPPSPYANRECLKDEDFIPLAEPVIGRDSVINEVRITKGTVMVLPFN 447
Db 334 LDMVVNETLRLFPPIAMLERVCKKQVE-----INGMFIKPGVVVMIPSYA 378
QY 448 INRSKFIYGEDAEFRPERWLEDVTDLSNS-IEAPYGHQASFISSPRACFGWRFAVEMK 506
Db 379 LHRDP-KYWTPEKFLPERFSKKNKNDIPYITPFG-----SGPRNCIGWRFALNMWK 431
QY 507 AFLFVTLRRVQFEP 520
Db 432 LALIRVLQNFSPK 445

RESULT 11
US-10-516-338-8
; Sequence 8, Application US/10516338
; Publication No. US20050164341A1
; GENERAL INFORMATION:
; APPLICANT: Astex Technology Limited
; APPLICANT: Cosme, Jose

; APPLICANT: Ward, Alison
; APPLICANT: Vuillard, Laurent
; APPLICANT: Williams, Pamela
; APPLICANT: Hamilton, Bruce
; TITLE OF INVENTION: Methods of Purification of Cytochrome P450 Proteins
; FILE REFERENCE: AHBCP6047252
; CURRENT APPLICATION NUMBER: US/10/516,338
; CURRENT FILING DATE: 2004-11-30
; NUMBER OF SEQ ID NOS: 84
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 8
; LENGTH: 485
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: 3A4
US-10-516-338-8

Query Match 13.8%; Score 394; DB 5; Length 485;
Best Local Similarity 28.7%; Pred. No. 3.8e-24;
Matches 142; Conservative 83; Mismatches 177; Indels 92; Gaps 20;
QY 47 FTGNFLDILSARTG-----ESHAKYREKYGSTLRFAGIAGAPVLNSTDPKVFNVHM-KE 99
Db 24 FLGN---ILSYHKGFDMFMECHKYKVGWGF---YDG--QQPVLAITDPDMIKTVLVE 75
QY 100 AYDY---PKPGMAARVLRIATGDGVTVAEGEAHRRHIMIPSLSAQAQVKSMPVIFLEKG 156
Db 76 CYSVFTNRRPFGPGVGMKSA-----ISIAEDBEWKRLSLSPFTSGKLKEMVPIIAQYG 131
QY 157 MELVDKMMEDAAEKDMVAGESAGEKKATRLT-EGVDVKDWVGRATLDVMAAGFDYKSD 215
Db 132 DVLVRLNRREA-----ETGKPVTLKDVFGAYSMDVITSTSGVNIID 172
QY 216 SLQNKTNELVAFVGLTGDGFAPTLDSFKAIM-WDFV-PYFRMK-RRHEIPLTQGLAV-- 270
Db 173 SLNNPQD-----PFVENTKLLRFDLPDFLSITVPFPLIPLEVLNICV 218
QY 271 -SRRVGIELMEQKQAVLGSASDAQVDKQVQGRDILSLVRANIAANLPSQKLSDEEV 329
Db 219 FPREVTFLRKSVKR-----MKESRLDTQKHRVDFLQLMIDSONSKETESHKALSDEL 273
QY 330 LAQISNLLPAGYETSTVLTWTFHRLSEDKAVQDKLREEICQI--DTDMPTLDLNLALPY 387
Db 274 VAQSIIIFAGYETTSVLSFIMYELATHPDVQVKLQEEIDAVLPNKAPPTYDTVLQMEY 333
QY 388 LEAFVKESLRLDPPSPYANRECLKDEDFIPLAEPVIGRDSVINEVRITKGTVMVLPFN 447
Db 334 LDMVVNETLRLFPPIAMLERVCKKQVE-----INGMFIKPGVVVMIPSYA 378
QY 448 INRSKFIYGEDAEFRPERWLEDVTDLSNS-IEAPYGHQASFISSPRACFGWRFAVEMK 506
Db 379 LHRDP-KYWTPEKFLPERFSKKNKNDIPYITPFG-----SGPRNCIGWRFALNMWK 431
QY 507 AFLFVTLRRVQFEP 520
Db 432 LALIRVLQNFSPK 445

RESULT 12
US-11-076-967-2
; Sequence 2, Application US/11076967
; Publication No. US20050159901A1
; GENERAL INFORMATION:
; APPLICANT: Fickler, Ian J
; APPLICANT: Vornheim, Clemens
; APPLICANT: Williams, Pamela A
; APPLICANT: Jhoti, Harren
; APPLICANT: Kirtan, Stewart Brian
; TITLE OF INVENTION: Crystal structure of cytochrome P450
; FILE REFERENCE: 620-282
; CURRENT APPLICATION NUMBER: US/11/076,967
; CURRENT FILING DATE: 2005-03-11

;; PRIOR APPLICATION NUMBER: US/10/690,991
;; PRIOR FILING DATE: 2003-10-23
;; PRIOR APPLICATION NUMBER: US 60/421,063
;; PRIOR FILING DATE: 2002-10-25
;; PRIOR APPLICATION NUMBER: PCT/GB02/02668
;; PRIOR FILING DATE: 2002-05-30
;; PRIOR APPLICATION NUMBER: US 10/221,036
;; PRIOR FILING DATE: 2002-04-02
;; PRIOR APPLICATION NUMBER: US 60/479,448
;; PRIOR FILING DATE: 2003-06-19
;; NUMBER OF SEQ ID NOS: 6
;; SOFTWARE: PatentIn version 3.1
;; SEQ ID NO 2
;; LENGTH: 485
;; TYPE: PRT
;; ORGANISM: Artificial sequence
;; FEATURE:
;; OTHER INFORMATION: Human 344 P450 protein truncated in its N-terminal region to
;; OTHER INFORMATION: delete the hydrophobic trans-membrane domain, and the region
;; OTHER INFORMATION: replaced by a short N-terminal sequence.
US-11-076-967-2

Query Match 13.8%; Score 394; DB 6; Length 485;
Best Local Similarity 28.7%; Pred. No. 3.8e-24;
Matches 142; Conservative 83; Mismatches 177; Indels 92; Gaps 20;
Qy 47 FTGNFLDILSARTG-----BEHAKREKYGSTLRFAGIAGAPVLNSTDPKVFNNHM-KE 99
Db 24 FLGN---ILSYHKGFCFMDCHEKKYGVWGF---YDG--QQPVLAITDPMIKTVLVE 75
Qy 100 AYDY---PKPGMAARVLRIATGDGVVTAEGEAHGRHRRIMIPSLSAQAVKSMVPIFEKG 156
Db 76 CYSVFTNRRPFGPGVGMKSA-----ISIAEDEEWKRLRLSLLSPTFTSGKLKEMVPIIAQYG 131
Qy 157 MELVDKWMEDAEKDMAGVAGESAGEKATRLT-EGVDVQKDWVGRATLDVMAAGFDVKSD 215
Db 132 DVLVRLNREA-----ETGKPVTLKDVFGAYSMDVITSTFGVNID 172
Qy 216 SLQNKTNELYVAVGLTDGFAPTLDSFKAIM-WDFV-PYFRIMK-RRHEIPLTQGLAV-- 270
Db 173 SLNNPQD-----PFVENTKKLLRFDFLDPFFLSITVPFPLIPILEVLNICV 218
Qy 271 -SRRVGIEMQKQKQAVLGSADQAVKDVQGRDILSLVRANIANLPSQKLSDEEV 329
Db 219 FPREVTFNLRKSVKR-----MKESLEDTQKRVDFLQMLIDSQNSKTESHKALSDLEL 273
Qy 330 LAQISNLLFAGYETSSVLTWMFRLSEDKAVQDKLREEICQI--DTDMPTLDLDELNALPY 387
Db 274 VAQSIIFIFAGYETSSVLSFIWYELATHPDVQQLQEEIDAVLPNKAPPTVDVLQMEY 333
Qy 388 LEAFVKESLRDPPSPYANRECKLDEDFIPLAEPVIGRDSGVINEVRITKGTVMVLPFN 447
Db 334 LDMVNETLRUPFIAMRLERVCKDVE-----INGMFIPKGVVVMIPSYA 378
Qy 448 INRSKFIYGEDAEFRPRERWLEDVTDLSNLS-IEAPYGHQASFIISGPACFRGFRFAVAMK 506
Db 379 LHRDP-KYWTPEKEFLPERFSKKNKNDIPVIYTPFG-----SGPRNCIGRFRFALMNMK 431
Qy 507 AFLFVTLRRVQEPF 520
Db 432 LALIRVLQNFSPK 445

RESULT 13
US-10-425-115-294241
; Sequence 294241, Application US/10425115
; Publication No. US20040214272A1
; GENERAL INFORMATION:
; APPLICANT: La Rosa, Thomas J.
; APPLICANT: Kovalic, David K.
; APPLICANT: Zhou, Yihua
; APPLICANT: Cao, Yongwei
; TITLE OF INVENTION: Nucleic Acid Molecules and Other Molecules Associated With

;; TITLE OF INVENTION: Plants
;; FILE REFERENCE: 38-21(53222)B
;; CURRENT APPLICATION NUMBER: US/10/425,115
;; CURRENT FILING DATE: 2003-04-28
;; NUMBER OF SEQ ID NOS: 369326
;; SEQ ID NO 294241
;; LENGTH: 543
;; TYPE: PRT
;; ORGANISM: Zea mays
;; FEATURE:
;; NAME/KEY: unsure
;; LOCATION: (1)..(543)
;; OTHER INFORMATION: unsure at all xaa locations
;; OTHER INFORMATION: Clone ID: MRT4577_31433C.1.pep
;; US-10-425-115-294241

Query Match 13.8%; Score 392.5; DB 4; Length 543;
Best Local Similarity 26.1%; Pred. No. 6e-24;
Matches 150; Conservative 95; Mismatches 226; Indels 103; Gaps 23;
Qy 6 LLTGALGLAASFWSASTAFPSL-----YLAPRSSLYNLOGPNHTNYPTGDFLDLSARTG- 60
Db 22 MVAATAVAALASWAFNALVHLVWRPYAIRRLRAQGVGRGPYT--FFTGSIGLGIKRLRAEG 80
Qy 61 -----EEH-----AKYREKYGSTLRFAGIAGA-PVLNSTDPKVFNNHMKDAYD 102
Db 81 AAVTLVDVDDHDFPMVQPHLRKMIALYGR--FYWTGARPNVCVADVNVVRQVL---FD 135
Qy 103 ----YKPGMAARVLRIATGDGVVTAEGEAHGRHRRIMIPSLSAQAVKSMVPIFEKGME 158
Db 136 RTGLYKPNLNPISRL-LKGLVLTGDDWKHRRKVVHFAFNMDKLMATMTATMSDCTRS 194
Qy 159 LVDKQMDAAEKDMAGVAGESAGEKATRLTEGVQKDWVGRATLDVMAAGFDYKSDSLQ 218
Db 195 MISEWDAQLOKED-----QSGRGHGHVHE---VELSSRFBELTADVISHATF----GSSY 242
Qy 219 NKTNELVAVFGLTDGFAPTLDSFKAIMWDFVPYFRIMKRRHEIPLTQGLAVSRVRGIEL 278
Db 243 NEGKRVFLAERLQH-----IAFSTIP-----NVQIPALKYLPTEKNLRTK 284
Qy 279 MEQKQKQAVLGSADQAVDKKDV---QGRDILSLVRANIANLPSQ-----KLSDEEV 329
Db 285 LDRQVRAMLMDIIEARLASKDGTAGGYGNDLLGLMLEA--CASPEHHGEMAPTTLSDMEI 342
Qy 330 LAQISNLLFAGYETSSVLTWMFRLSEDKAVQDKLREEI---CQIDTDMPTLDLDELNALP 386
Db 343 VDECKTFFAGHDTTSHLTWASFLSTHPWQHRLRDEVRRREGC-DDEVPTGDALNRLK 401
Qy 387 YLEAFVKESLRDPPSPYANRECKLDEDFIPLAEPVIGRDSGVINEVRITKGTVMVLPF 446
Db 402 LVNNFLETLLKLYGPVSLIQRKAGSDLD-----LGGIRVPSGAILTIRLA 446
Qy 447 NINRSKFIYGEDAEFRPRERWLEDVTDLSNLSIEAPYGHQASFIISGPACFRGFRFAVAMK 506
Db 447 TIXRDKVWGEDAGEFRLEFRFENGVTAAKHPNA----LLSFSSGPRSCIGNFAMIEAK 502
Qy 507 AFLFVTLRRVQEPFIISHPEYEH--ITLIISRRP 538
Db 503 AVAMILQRFALE---LSPKYVHAPMDLITLRPR 533

RESULT 14
US-10-751-235-35
; Sequence 35, Application US/10751235
; Publication No. US20050150002A1
; GENERAL INFORMATION:
; APPLICANT: Dellapenna, Dean
; APPLICANT: Tian, Li
; APPLICANT: Kim, Joonyul
; TITLE OF INVENTION: Novel Carotenoid Hydroxylases for Use in Engineering Carotenoid
; TITLE OF INVENTION: Metabolism in Plants
; FILE REFERENCE: MSU-08604

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OM protein - protein search, using sw model

Run on: November 21, 2005, 16:52:36 ; Search time 26 Seconds
(without alignments)
1771.167 Million cell updates/sec

Title: US-10-066-007A-1
Perfect score: 2852
Sequence: 1 MFILVLTGALGLAAPSWSAS.....RIVGREKEGYQMLQVKEPVE 557

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Gapop 10.0 , Gapext 0.5

Searched: 572060 seqs, 82675679 residues

Total number of hits satisfying chosen parameters: 572060

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : Issued Patents AA.*
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2: /cgn2_6/ptodata/1/iaa/6 COMB.pdp.*
3: /cgn2_6/ptodata/1/iaa/H COMB.pdp.*
4: /cgn2_6/ptodata/1/iaa/PCTUS COMB.pdp.*
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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	DB ID	Description
1	2852	100.0	557	2	US-09-518-386B-1
2	2852	100.0	557	2	US-09-518-386B-3
3	398.5	14.0	508	2	US-09-949-016-7092
4	398.5	14.0	508	2	US-09-949-016-8562
5	396.5	13.9	503	2	US-09-144-367-2
6	385.5	13.5	508	2	US-09-949-016-8561
7	385	13.5	502	2	US-09-949-016-5992
8	385	13.5	507	2	US-09-949-016-7091
9	370	13.0	504	1	US-08-457-274A-25
10	370	13.0	504	4	PCT-US95-05758-25
11	367	12.9	520	2	US-09-527-073-2
12	350	12.3	527	2	US-09-949-016-10078
13	346.5	12.1	524	2	US-09-991-181-264
14	346.5	12.1	524	2	US-09-990-444-264
15	346.5	12.1	524	2	US-09-997-333-264
16	346.5	12.1	524	2	US-09-992-598-264
17	344	12.1	524	2	US-09-976-594-533
18	344	12.1	520	2	US-09-949-016-6003
19	338.5	11.9	503	2	US-09-583-447A-2
20	331	11.6	540	2	US-09-302-620B-99
21	330.5	11.6	507	1	US-08-457-274A-22
22	330.5	11.6	507	4	PCT-US95-05758-22
23	328	11.5	504	2	US-09-583-447A-4
24	328	11.5	540	2	US-09-302-620B-98
25	326.5	11.4	541	2	US-09-158-767-19
26	326.5	11.4	541	2	US-09-158-767-20
27	326.5	11.4	541	2	US-09-713-794-19

28	326.5	11.4	541	2	US-09-713-794-20	Sequence 20, Appl
29	321	11.3	576	2	US-08-948-564-16	Sequence 16, Appl
30	320.5	11.2	529	2	US-09-270-767-46468	Sequence 46468, A
31	318.5	11.2	526	1	US-08-298-426-4	Sequence 4, Appl
32	315	11.0	1049	2	US-10-018-730A-4	Sequence 4, Appl
33	304.5	10.7	436	2	US-09-902-540-12913	Sequence 12913, A
34	301.5	10.6	475	2	US-09-710-262E-13	Sequence 13, Appl
35	294.5	10.3	489	2	US-09-852-067-4	Sequence 4, Appl
36	294.5	10.3	489	2	US-10-338-691-4	Sequence 4, Appl
37	294	10.3	522	2	US-09-302-620B-97	Sequence 97, Appl
38	289	10.1	522	2	US-09-302-620B-96	Sequence 96, Appl
39	287.5	10.1	536	2	US-09-949-016-10134	Sequence 10134, A
40	286	10.0	548	2	US-09-248-796A-15537	Sequence 15537, A
41	278.5	9.8	507	2	US-09-248-796A-15540	Sequence 15540, A
42	276	9.7	420	2	US-09-583-447A-6	Sequence 6, Appl
43	276	9.7	467	2	US-09-126-420A-17	Sequence 17, Appl
44	273.5	9.6	500	2	US-09-949-016-7973	Sequence 7973, Ap
45	273.5	9.6	513	2	US-09-949-016-5993	Sequence 5993, Ap

ALIGNMENTS

RESULT 1
US-09-518-386B-1
; Sequence 1, Application US/09518386B
; Patent No. 6365386
; GENERAL INFORMATION:
; APPLICANT: HOSHINO, Tatsuo
; APPLICANT: OJIMA, Kazuyuki
; APPLICANT: SETOGUCHI, Yutaka
; TITLE OF INVENTION: ASTAXANTHIN SYNTHETASE
; FILE REFERENCE: ASTAXANTHIN SYNTHETASE
; CURRENT APPLICATION NUMBER: US/09/518.386B
; CURRENT FILING DATE: 2000-03-03
; PRIOR FILING DATE: 1999-03-09
; PRIOR APPLICATION NUMBER: EP 99104668.1
; PRIOR APPLICATION NUMBER: EP 00101666.6
; PRIOR FILING DATE: 2000-02-01
; NUMBER OF SEQ ID NOS: 32
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 1
; LENGTH: 557
; TYPE: PRT
; ORGANISM: Phaffia rhodozyma
; FEATURE:
; NAME/KEY: TRANSIT
; LOCATION: (1)..(26)
US-09-518-386B-1

part came.

Query Match	100.0%;	Score	2852;	DB	2;	Length	557;
Best Local Similarity	100.0%;	Pred. No.	3.2e-277;	Mismatches	0;	Indels	0;
Matches	557;	Conservative	0;	Mismatches	0;	Indels	0;
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Db	1	MFILVLTGALGLAAPSWSASIAFSLYAPRRSSLYNQGPNHNTNYFTGNFLDILSARTG	60				
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Db	241	SFKAIMDVFVYFRTMKRRHEIPTQGLAVSRVRVGIEMEQKQAVLGSASDAQVKKDV	300				

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Qy 301 QGRDILSLVRANIAANLPESOKLSDEVLQAISNLLFAGYETSSSTVLTWTFHRLSDKA 360
Db 301 QGRDILSLVRANIAANLPESOKLSDEVLQAISNLLFAGYETSSSTVLTWTFHRLSDKA 360
Qy 361 VQKLRREICQIDTDMPTLDELNALPYLEAFVKESLRLDPPSPYANRECLKDSDFIPLAE 420
Db 361 VQKLRREICQIDTDMPTLDELNALPYLEAFVKESLRLDPPSPYANRECLKDSDFIPLAE 420
Qy 421 PVIGRGSVINEVRITKGTWMLPLFNNRSKFIYGEDAEERPERWLEDTVDSLSNSIEA 480
Db 421 PVIGRGSVINEVRITKGTWMLPLFNNRSKFIYGEDAEERPERWLEDTVDSLSNSIEA 480
Qy 481 PYGHOASFISSGRACFGWRFAVAEMKAFVLTLLRRVQFEPFIISHPEYEHITLIISPRIV 540
Db 481 PYGHOASFISSGRACFGWRFAVAEMKAFVLTLLRRVQFEPFIISHPEYEHITLIISPRIV 540
Qy 541 GREKEGYQMRLOQKPV 557
Db 541 GREKEGYQMRLOQKPV 557

RESULT 2
US-09-518-386B-3
; Sequence 3, Application US/09518386B
; Patent No. 6365386
; GENERAL INFORMATION:
; APPLICANT: HOSHINO, Tatsuo
; APPLICANT: OJIMA, Kazuyuki
; APPLICANT: SETOGUCHI, Yutaka
; TITLE OF INVENTION: ASTAXANTHIN SYNTHETASE
; FILE REFERENCE: ASTAXANTHIN SYNTHETASE
; CURRENT APPLICATION NUMBER: US/09/518,386B
; CURRENT FILING DATE: 2000-03-03
; PRIOR APPLICATION NUMBER: EP 99104668.1
; PRIOR FILING DATE: 1999-03-09
; PRIOR APPLICATION NUMBER: EP 00101666.6
; PRIOR FILING DATE: 2000-02-01
; NUMBER OF SEQ ID NOS: 32
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 3
; LENGTH: 557
; TYPE: PRT
; ORGANISM: Phaffia rhodozyma
US-09-518-386B-3

Query Match 100.0%; Score 2852; DB 2; Length 557;
Best Local Similarity 100.0%; Pred. No. 3.2e-277;
Matches 557; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 MFILVLLTGALGLAAPSWSIAFFSLYLAPRRSSLYNLQGNHTNYFTGNFLDLSARTG 60
Db 1 MFILVLLTGALGLAAPSWSIAFFSLYLAPRRSSLYNLQGNHTNYFTGNFLDLSARTG 60
Qy 61 BEHAKYREKYGSTLRFAGIAGAPVLNSTDPKFNHVMKEAYDYPKPGMAARVLRATG 120
Db 61 BEHAKYREKYGSTLRFAGIAGAPVLNSTDPKFNHVMKEAYDYPKPGMAARVLRATG 120
Qy 121 VVTAEGEAHKRRHRIIMPISLSAQAVKSMVPIFLEKGMELVDKMDAAEKDMVAGESAGE 180
Db 121 VVTAEGEAHKRRHRIIMPISLSAQAVKSMVPIFLEKGMELVDKMDAAEKDMVAGESAGE 180
Qy 181 KKATRLTEGVVDKDWGRATLDYMALAGFDYKSDSLQNKTNELIYAFVGLTDGFAPTLD 240
Db 181 KKATRLTEGVVDKDWGRATLDYMALAGFDYKSDSLQNKTNELIYAFVGLTDGFAPTLD 240
Qy 241 SFKAIMDVPYFRTMKRRHEIPUTQGLAVSRRVGIEMEQKQAVLGSASDAQVDKDV 300
Db 241 SFKAIMDVPYFRTMKRRHEIPUTQGLAVSRRVGIEMEQKQAVLGSASDAQVDKDV 300
Qy 301 QGRDILSLVRANIAANLPESOKLSDEVLQAISNLLFAGYETSSSTVLTWTFHRLSDKA 360
Db 301 QGRDILSLVRANIAANLPESOKLSDEVLQAISNLLFAGYETSSSTVLTWTFHRLSDKA 360
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Qy 361 VQKLRREICQIDTDMPTLDELNALPYLEAFVKESLRLDPPSPYANRECLKDSDFIPLAE 420
Db 361 VQKLRREICQIDTDMPTLDELNALPYLEAFVKESLRLDPPSPYANRECLKDSDFIPLAE 420
Qy 421 PVIGRGSVINEVRITKGTWMLPLFNNRSKFIYGEDAEERPERWLEDTVDSLSNSIEA 480
Db 421 PVIGRGSVINEVRITKGTWMLPLFNNRSKFIYGEDAEERPERWLEDTVDSLSNSIEA 480
Qy 481 PYGHOASFISSGRACFGWRFAVAEMKAFVLTLLRRVQFEPFIISHPEYEHITLIISPRIV 540
Db 481 PYGHOASFISSGRACFGWRFAVAEMKAFVLTLLRRVQFEPFIISHPEYEHITLIISPRIV 540
Qy 541 GREKEGYQMRLOQKPV 557
Db 541 GREKEGYQMRLOQKPV 557

RESULT 3
US-09-949-016-7092
; Sequence 7092, Application US/09949016
; Patent No. 6812339
; GENERAL INFORMATION:
; APPLICANT: VENTER, J. Craig et al.
; TITLE OF INVENTION: POLYMORPHISMS IN KNOWN GENES ASSOCIATED
; WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF
; FILE REFERENCE: C001307
; CURRENT APPLICATION NUMBER: US/09/949,016
; CURRENT FILING DATE: 2000-04-14
; PRIOR APPLICATION NUMBER: 60/241,755
; PRIOR FILING DATE: 2000-10-20
; PRIOR APPLICATION NUMBER: 60/237,768
; PRIOR FILING DATE: 2000-10-03
; PRIOR APPLICATION NUMBER: 60/231,498
; PRIOR FILING DATE: 2000-09-08
; NUMBER OF SEQ ID NOS: 207012
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 7092
; LENGTH: 508
; TYPE: PRT
; ORGANISM: Human
US-09-949-016-7092

Query Match 14.0%; Score 398.5; DB 2; Length 508;
Best Local Similarity 28.1%; Pred. No. 6.9e-31;
Matches 152; Conservative 92; Mismatches 202; Indels 95; Gaps 23;

Qy 3 ILVLLTGALGLAAPSWSIAFFSLYLAPRRS-SLYNLQGNHTNY-FTGNFLDLSART 59
Db 4 VVVALIPDLAMETWLLAVSLVLLYLYGTHSHGLPKLGIPTLPPLGN---ILSYHK 60
Qy 60 G-----BEHAKYREKYGSTLRFAGIAGAPVLNSTDPKFNHVM-KEAYDY---PKPGMA 109
Db 61 GFCMFMECHKYKGVGF---YDG--QQPVLAITDPDMIKTVLVKECYSVFTNRPFPG 115
Qy 110 ARVLRATGCVVVTASGEAHKRRHRIIMPISLSAQAVKSMVPIFLEKGMELVDKMDAAE 169
Db 116 VGPMSA-----ISIADEEWKRLRSULTPTTSKKUKEMVPIIAQGDVLRVLRREA-- 169
Qy 170 KDMVAGESAGEKKATRLT-EGVDVVDKDWGRATLDYMALAGFDYKSDSLQNKTNELIYAF 228
Db 170 -----ETGKPVTLKDVFGAYSMVDITSTSGVWNIDSLNNPD----- 206
Qy 229 VGLTDGFAPTLDSFKAIM-WDFV-PYFRTMK-RRHEIPLTQGLAV---SRRVGIEMEQK 282
Db 207 -----PFVENTKKLRFDFLDPFLLSITVFPFLIPLEVLNICVFPREVTNFRKSV 258
Qy 283 KQAVLGSASDAQVDKDWGRDILSLVRANIAANLPESOKLSDEVLQAISNLLFAGYE 342
Db 259 KR-----MKESRLDTQKRVDFLQMLMDSQSKETESHKALSDELVAQSIIFAGYE 313
Qy 343 TSSTVLTWTFHRLSDKAVQDKLREPIQI--DTDMPTLDELNALPYLEAFVKESLRLDP 400
Db 343 TSSTVLTWTFHRLSDKAVQDKLREPIQI--DTDMPTLDELNALPYLEAFVKESLRLDP 400
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Db 314 TTSSVLSFIMYELATHDPVQKQLEEDAVLPNKAPPTDYTLQMEYLDVMVNETLRFP 373
Qy 401 PSPANRECLKDEDFIPLAEPVIGRDSGVINEVIRITKGTWYMLPLFNINRSKFIYGDAE 460
Db 374 IAMLERVCKKQVE-----INGMFIPKGVVVMIPSYALHRDP-KYWTEPE 417
Qy 461 EFRPERWLEDVTDLSNS-IEAPYGHQASFISSGRACFGHFAVAEMKAFILFVTLRRVQFE 519
Db 418 KFLPERFSKKNIDPIYITPFG-----SGPRNCIGMRPFALMNMKALIRVLQNFSPFK 471
Qy 520 P 520
Db 472 P 472

RESULT 4
US-09-949-016-8562
; Sequence 8562, Application US/09949016
; Patent No. 6812339
; GENERAL INFORMATION:
; APPLICANT: VENTER, J. Craig et al.
; TITLE OF INVENTION: POLYMORPHISMS IN KNOWN GENES ASSOCIATED
; WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF
; FILE REFERENCE: CL0011307
; CURRENT APPLICATION NUMBER: US/09/949,016
; CURRENT FILING DATE: 2000-04-14
; PRIOR APPLICATION NUMBER: 60/241,755
; PRIOR FILING DATE: 2000-10-20
; PRIOR APPLICATION NUMBER: 60/237,768
; PRIOR FILING DATE: 2000-10-03
; PRIOR APPLICATION NUMBER: 60/231,498
; PRIOR FILING DATE: 2000-09-08
; NUMBER OF SEQ ID NOS: 207012
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 8562
; LENGTH: 508
; TYPE: PRT
; ORGANISM: Human
US-09-949-016-8562

Query Match
Best Local Similarity 14.0%; Score 398.5; DB 2; Length 508;
Matches 152; Conservative 92; Mismatches 202; Indels 95; Gaps 23;

Qy 3 ILVLTGALGLAASFWSIAFSLYLAPRRS-SLYNLOG-PNHTNY-FTGNFLDILSART 59
Db 4 VVMALIPDLAMETWLLAVSLVLLYGYTHSHGLKFGIPGPTPLFLGN---ILSYHK 60
Qy 60 G-----BEHAKYREKYGSTLRFAGIAGAPVLNSTDPKVFNHVM-KEAYDY---PKPGMA 109
Db 61 GFCMFDMCHCKYKVGWGF---YDG--QQPVLAITDPDMIKTVLVKECYSVFTNRRPFGP 115
Qy 110 ARVLATGDDGVVTAEGEAHKHRRIMIPSLSAQAVKSMVPIFLEKGMELVDKMDMEDAAE 169
Db 116 VCFMKA-----ISIAEDEEWKRLSLSPTFTSGKLKEMVPIAQYGDVLRNLRREA-- 169
Qy 170 KDMAVGESAGEKATRLT-EGVDVKDWGRATLDVMALAGDYKSDLSQNKTNELLYAVF 228
Db 170 -----ETGKPVTLKDFGAYSDVITSTSGVNIIDSLNNPD----- 206
Qy 229 VGLTGFAPTLDSFKAIM-WDFV-PYFRMTK--RRHEIPTQGLAV---SRRVGIELMEQK 282
Db 207 -----PFVENTKLLRDFDLDPFFLSITVPFPIPILEVLNICVFPREVNTFLRKS 258
Qy 283 KOAVLGASDAQVDKQVGRDILSLVRANIAANLPESQKLSDBEVLQAIENLLPAGYE 342
Db 259 KR-----MKESLEDQKRVDFLQMLDSQNSKETESHKALSDELVAQSIIIFAGYE 313
Qy 343 TGSSTVLTWMPHRLSEDAVQDKLRBEICQI--DTMPTLDELNALPYLEAFVKESLRLDP 400
Db 314 TTSSVLSFIMYELATHDPVQKQLEEDAVLPNKAPPTDYTLQMEYLDVMVNETLRFP 373
Qy 401 PSPANRECLKDEDFIPLAEPVIGRDSGVINEVIRITKGTWYMLPLFNINRSKFIYGDAE 460
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Db 374 IAMLERVCKKQVE-----INGMFIPKGVVVMIPSYALHRDP-KYWTEPE 417
Qy 461 EFRPERWLEDVTDLSNS-IEAPYGHQASFISSGRACFGHFAVAEMKAFILFVTLRRVQFE 519
Db 418 KFLPERFSKKNIDPIYITPFG-----SGPRNCIGMRPFALMNMKALIRVLQNFSPFK 471
Qy 520 P 520
Db 472 P 472

RESULT 5
US-09-144-367-2
; Sequence 2, Application US/09144367
; Patent No. 6432639
; GENERAL INFORMATION:
; APPLICANT: Lichter, Jay
; APPLICANT: Guido, Marco
; TITLE OF INVENTION: GENOTYPING OF HUMAN CYP3A4
; FILE REFERENCE: SEQ-12P
; CURRENT APPLICATION NUMBER: US/09/144,367
; CURRENT FILING DATE: 1998-08-31
; PRIOR APPLICATION NUMBER: 60/058,612
; PRIOR FILING DATE: 1997-09-10
; NUMBER OF SEQ ID NOS: 58
; SOFTWARE: FastSeq for Windows Version 3.0
; SEQ ID NO 2
; LENGTH: 503
; TYPE: PRT
; ORGANISM: H. sapiens
US-09-144-367-2

Query Match
Best Local Similarity 13.9%; Score 396.5; DB 2; Length 503;
Matches 153; Conservative 88; Mismatches 195; Indels 97; Gaps 24;

Qy 13 LAAPFSW--ASIAFSLYLAPRRS-SLYNLOG-PNHTNY-FTGNFLDILSARTG-----E 61
Db 7 LAMETWLLAVSLVLLYGYTHSHGLKFGIPGPTPLFLGN---ILSYHKGFCMFDM 63
Qy 62 EHAKYREKYGSTLRFAGIAGAPVLNSTDPKVFNHVM-KEAYDY---PKPGMAARVLRIAT 117
Db 64 CHKKYKVGWGF---YDG--QQPVLAITDPDMIKTVLVKECYSVFTNRRPFGVGMKSA- 117
Qy 118 GDGVVTAEGEAHKHRRIMIPSLSAQAVKSMVPIFLEKGMELVDKMDMEDAAEKDVAEGES 177
Db 118 ---ISIAEDEEWKRLSLSPTFTSGKLKEMVPIAQYGDVLRNLRREA----- 164
Qy 178 AGEKATRLT-EGVDVKDWGRATLDVMALAGDYKSDLSQNKTNELLYAVFGLTGDGA 236
Db 165 -----ETGKPVTLKDFGAYSDVITSTSGVNIIDSLNNPD----- 201
Qy 237 PTLDSFKAIM-WDFV-PYFRMTK--RRHEIPTQGLAV---SRRVGIELMEQKQAVLGA 290
Db 202 PFVENTKLLRDFDLDPFFLSITVPFPIPILEVLNICVFPREVNTFLRKSVKR-----M 256
Qy 291 SDQAVDKQVGRDILSLVRANIAANLPESQKLSDBEVLQAIENLLPAGYETSSTVLTW 350
Db 257 KESLEDQKRVDFLQMLDSQNSKETESHKALSDELVAQSIIIFAGYETTSVLSUF 316
Qy 351 MFHRLSEDAVQDKLRBEICQI--DTMPTLDELNALPYLEAFVKESLRLDPPSPYANRE 408
Db 317 IMYELATHDPVQKQLEEDAVLPNKAPPTDYTLQMEYLDVMVNETLRFPAMRLERV 376
Qy 409 CLKDEDFIPLAEPVIGRDSGVINEVIRITKGTWYMLPLFNINRSKFIYGDAEABEPRLWL 468
Db 377 CKKQVE-----INGMFIPKGVVVMIPSYALHRDP-KYWTEPEKFLPERFS 420
Qy 469 EDVTDLSNS-IEAPYGHQASFISSGRACFGHFAVAEMKAFILFVTLRRVQFE 520
Db 421 KKNKDNIDPIYITPFG-----SGPRNCIGMRPFALMNMKALIRVLQNFSPFK 467
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Query Match	13.0%;	Score 370;	DB 4;	Length 504;
Best Local Similarity	26.2%;	Pred. No. 5e-28;		
Matches 147;	Conservative 84;	Mismatches 189;	Indels 140;	Gaps 23;

QY	7	LTGALGLAAFSWASIAFPSLY-LAPRSSLYNIQQ-----PNHNYYTFGNF-LDI	54
Db	3	LLSALTLETWLLAVLVLLVYGFQTRTHGLPKQGIQPKPIPFQFQTVLVNYGMLWKFDV	62
QY	55	LSARTGEBHAKYREKYGSTLRPAGIAGAPVLNSTDPKVFNNVM-KEAY-----DYPKP	106
Db	63	-----ECHKKYGIWG--LFDG--QMPFLATDTTEMIKNVLVKECFSVFTNRDRFGPV	111
QY	107	GMAARVLRIATGDGVWTAEGEAAKHRRRIIMPSLSAAQVKSVMVPFLEKGMELVDKMMED	166
Db	112	GI-----NGKAVSVAKDEWKYRALLSPFTSGRIKEMFPPIEQVDILVKYLQOE	163
QY	167	AAEKDMVAGESAGEKKATRLT-EGVDVKDVGGRATLDVWALAGFDYKSDSLQN-----	219
Db	164	A-----ETGKPVTKKVFAGYSMDVITSTSGVNVDSLNNPKDPFV	204

1	PRIOR APPLICATION NUMBER: 60/0896000
2	PRIOR FILING DATE: 1998-06-17
3	PRIOR APPLICATION NUMBER: 60/089653
4	PRIOR FILING DATE: 1998-06-17
5	PRIOR APPLICATION NUMBER: 60/089801
6	PRIOR FILING DATE: 1998-06-18
7	PRIOR APPLICATION NUMBER: 60/089907
8	PRIOR FILING DATE: 1998-06-18
9	PRIOR APPLICATION NUMBER: 60/089908
10	PRIOR FILING DATE: 1998-06-18
11	PRIOR APPLICATION NUMBER: 60/089947
12	PRIOR FILING DATE: 1998-06-19
13	PRIOR APPLICATION NUMBER: 60/089948
14	PRIOR FILING DATE: 1998-06-19
15	PRIOR APPLICATION NUMBER: 60/089952
16	PRIOR FILING DATE: 1998-06-19
17	PRIOR APPLICATION NUMBER: 60/090246
18	PRIOR FILING DATE: 1998-06-22
19	PRIOR APPLICATION NUMBER: 60/090252
20	PRIOR FILING DATE: 1998-06-22
21	PRIOR APPLICATION NUMBER: 60/090254
22	PRIOR FILING DATE: 1998-06-22
23	PRIOR APPLICATION NUMBER: 60/090349
24	PRIOR FILING DATE: 1998-06-23
25	PRIOR APPLICATION NUMBER: 60/090355
26	PRIOR FILING DATE: 1998-06-23
27	PRIOR APPLICATION NUMBER: 60/090429
28	PRIOR FILING DATE: 1998-06-24
29	PRIOR APPLICATION NUMBER: 60/090431
30	PRIOR FILING DATE: 1998-06-24
31	PRIOR APPLICATION NUMBER: 60/090435
32	PRIOR FILING DATE: 1998-06-24
33	PRIOR APPLICATION NUMBER: 60/090444
34	PRIOR FILING DATE: 1998-06-24
35	PRIOR APPLICATION NUMBER: 60/090445
36	PRIOR FILING DATE: 1998-06-24
37	PRIOR APPLICATION NUMBER: 60/090472
38	PRIOR FILING DATE: 1998-06-24
39	PRIOR APPLICATION NUMBER: 60/090557
40	PRIOR FILING DATE: 1998-06-24
41	PRIOR APPLICATION NUMBER: 60/090535
42	PRIOR FILING DATE: 1998-06-24
43	PRIOR APPLICATION NUMBER: 60/090540
44	PRIOR FILING DATE: 1998-06-24
45	PRIOR APPLICATION NUMBER: 60/090542
46	PRIOR FILING DATE: 1998-06-24
47	PRIOR APPLICATION NUMBER: 60/090690
48	PRIOR FILING DATE: 1998-06-25
49	PRIOR APPLICATION NUMBER: 60/090694
50	PRIOR FILING DATE: 1998-06-25
51	PRIOR APPLICATION NUMBER: 60/090695
52	PRIOR FILING DATE: 1998-06-25
53	PRIOR APPLICATION NUMBER: 60/090696
54	PRIOR FILING DATE: 1998-06-25
55	PRIOR APPLICATION NUMBER: 60/090862
56	PRIOR FILING DATE: 1998-06-26
57	PRIOR APPLICATION NUMBER: 60/090863
58	PRIOR FILING DATE: 1998-06-26
59	PRIOR APPLICATION NUMBER: 60/091360
60	PRIOR FILING DATE: 1998-07-01
61	PRIOR APPLICATION NUMBER: 60/091478
62	PRIOR FILING DATE: 1998-07-02
63	PRIOR APPLICATION NUMBER: 60/091544
64	PRIOR FILING DATE: 1998-07-01
65	PRIOR APPLICATION NUMBER: 60/091519
66	PRIOR FILING DATE: 1998-07-02
67	PRIOR APPLICATION NUMBER: 60/091626
68	PRIOR FILING DATE: 1998-07-02
69	PRIOR APPLICATION NUMBER: 60/091633

; PRIOR FILING DATE: 1998-06-10
; PRIOR APPLICATION NUMBER: 60/088810
; PRIOR FILING DATE: 1998-06-10
; PRIOR APPLICATION NUMBER: 60/088824
; PRIOR FILING DATE: 1998-06-10
; PRIOR APPLICATION NUMBER: 60/088826
; PRIOR FILING DATE: 1998-06-10
; PRIOR APPLICATION NUMBER: 60/088858
; PRIOR FILING DATE: 1998-06-11
; PRIOR APPLICATION NUMBER: 60/088861
; PRIOR FILING DATE: 1998-06-11
; PRIOR APPLICATION NUMBER: 60/088876
; PRIOR FILING DATE: 1998-06-11
; PRIOR APPLICATION NUMBER: 60/089105
; PRIOR FILING DATE: 1998-06-12
; PRIOR APPLICATION NUMBER: 60/089440
; PRIOR FILING DATE: 1998-06-16
; PRIOR APPLICATION NUMBER: 60/089512
; PRIOR FILING DATE: 1998-06-16
; PRIOR APPLICATION NUMBER: 60/089514
; PRIOR FILING DATE: 1998-06-16
; PRIOR APPLICATION NUMBER: 60/089532
; PRIOR FILING DATE: 1998-06-17
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; PRIOR FILING DATE: 1998-06-18
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; PRIOR FILING DATE: 1998-06-19
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; PRIOR FILING DATE: 1998-06-19
; PRIOR APPLICATION NUMBER: 60/089952
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; PRIOR APPLICATION NUMBER: 60/090557
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; PRIOR APPLICATION NUMBER: 60/090676
; PRIOR FILING DATE: 1998-06-25
; PRIOR APPLICATION NUMBER: 60/090678
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; PRIOR APPLICATION NUMBER: 60/090690
; PRIOR FILING DATE: 1998-06-25
; PRIOR APPLICATION NUMBER: 60/090694
; PRIOR FILING DATE: 1998-06-25
; PRIOR APPLICATION NUMBER: 60/090695
; PRIOR FILING DATE: 1998-06-25
; PRIOR APPLICATION NUMBER: 60/090696
; PRIOR FILING DATE: 1998-06-25
; PRIOR APPLICATION NUMBER: 60/090862
; PRIOR FILING DATE: 1998-06-26
; PRIOR APPLICATION NUMBER: 60/090863
; PRIOR FILING DATE: 1998-06-26
; PRIOR APPLICATION NUMBER: 60/091360
; PRIOR FILING DATE: 1998-07-01
; PRIOR APPLICATION NUMBER: 60/091478
; PRIOR FILING DATE: 1998-07-02
; PRIOR APPLICATION NUMBER: 60/091544
; PRIOR FILING DATE: 1998-07-01
; PRIOR APPLICATION NUMBER: 60/091519
; PRIOR FILING DATE: 1998-07-02
; PRIOR APPLICATION NUMBER: 60/091626
; PRIOR FILING DATE: 1998-07-02
; PRIOR APPLICATION NUMBER: 60/091633
; PRIOR FILING DATE: 1998-07-02
; PRIOR APPLICATION NUMBER: 60/091978
; PRIOR FILING DATE: 1998-07-07
; PRIOR APPLICATION NUMBER: 60/091982
; PRIOR FILING DATE: 1998-07-07
; PRIOR APPLICATION NUMBER: 60/092182
; PRIOR FILING DATE: 1998-07-09

Query Match 12.1%; Score 346.5; DB 2; Length 524;

Best Local Similarity 23.6%; Pred. No. 1.2e-25;
Matches 140; Conservative 104; Mismatches 211; Indels 137; Gaps 26;

QY 3 ILVLLTGALGLA-AFSWASIAFFSLYLAPRRSSLYNLQGNHNTVFTGNFLDILSARTG- 60
Db 21 LLLLVLGWSLLARILAWT---YAFYNNCR--LQCFQPPKRNFWGHLGLITTEEGL 74
QY 61 ----EEHAKYREKYGSTLRFAGIAGAPVLNSTDPKVFNVHMK-EAYDVPKPGMAARVLRI 115
Db 75 KDSQMSATYSQ--GFTVWLGP1--IPFIVLCHPDITRSITNASAAIAPKDNLFIRFLKP 130
QY 116 ATGDGVVTAEGEAHKKRRRIMIPISLAQAVKSMVPIFILEKGMELVDKXMEDAAEKDMVVG 175
Db 131 WLGEGLISGGDKWSRHRMLTPAFHFNILKSYITIFNRSANIMLDKQWHLASE-----G 185
QY 176 ESAGEKKATRLTEGVDVVDKMWGRATLDVMALAGFDYKSDSLQNKTNELYVAFVGLTDGF 235
Db 186 SSR-----LDMFEHISLWTLDSLQKCIISFDS-HQQRPSB-YIA----- 223
QY 236 APTLDSFKAIM-----WDFVPYFR-----TMKRRHEIPLT 265
Db 224 --TILELSALVEKRSQHILQHMDFLYLSHDGRFRHACRLVHDFTDVAVIRERRTLF-T 280
QY 266 QGLAVSRVRVGIEMBEQKQAVLGSASDQAVDKDVQGRDILSLVRANLANLPESOKLS 325
Db 281 QGI-----DFFKDKAKSKTLDIFDVL-----LLSKDEGKALS 314
QY 326 DEEVLAQISNLLFAGYETSSTVLTMFHRLEDKAVQDKLREEICQI--DTDMPTL--DE 381
Db 315 DEDIRAEADTFMFGGHDTTASGLSNVLYNLAHPEYQRCRQEQVQELLKDRDPKEIWD 374
QY 382 LNALPYLEAFVKESLRLDPPSPYANRECLKDEDFIPLAEPVIGRSGSVINEVRITKGMV 441
Db 375 LAQLFLLTWCVKESLRLHPPAFFISRCTQD-----IVLPDGRV-----IPKGITC 420


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; PRIOR FILING DATE: 1998-06-19
; PRIOR APPLICATION NUMBER: 60/090246
; PRIOR FILING DATE: 1998-06-22
; PRIOR APPLICATION NUMBER: 60/090252
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Query Match 12.1%; Score 346.5; DB 2; Length 524;
Best Local Similarity 23.6%; Pred. No. 1.2e-25;
Matches 140; Conservative 104; Mismatches 211; Indels 137; Gaps 26;

QY 3 ILVLLTGALGA-AFWSASTAFFSLYLAPRSSLYNLOGPNHNTYFTGNFLDILSARTG- 60
Db 21 LLLLVGSWLLARILAWT-----YAFYNNCR--LQCFPPQPKKNFWFWGLITPTTEGL 74
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QY 61 -----EEHAKYREKYGSTLRFAGIAGAPVLNSTDPKVFENHVK-EAYDYKPGKMAARVRI 115
Db 75 KDSOTMSATYSQ--GFTVWLGPI--IPFIVLCHPDTIRSIITWASAAIAIPKDNLFIRFLKP 130
QY 116 ATGDGVVTAAGEAKHRRIMIPSLPSAQAVKSMVPIFLEKGMELVDKMMEDAAEKDMAVG 175
Db 131 WLGEIGILLGGDKWSRHRMLTPAFHFNILKSYITTFNKSANIMLMDKQHLASE-----G 185
QY 176 ESAGEKKATRLTEGVDVVDWGRATLDVMALAGPDYKSDSLQNKTNELYVAFVGLTDGF 235
Db 186 SSR-----LDMEFHSLSMTLDSLKQCFSDS-HCOERPESE-YIA----- 223
QY 236 APTLDSFKAIM-----WDFVFPYR-----TMKRRHEIPT 265
Db 224 --TILELSALVEKRSQHILQHMDFLYYLSDGRRFHRACRLVHDFTDVIRERRRRLP-T 280
QY 266 QGLAVSRRVGIELMEQKKQAVLGSASDOAVDKKDVQGRDILSLVLRANTAAANLPESOKLS 325
Db 281 QGI-----DDFFKDKAKSKTLDIFDVL-----LLSKDEGKALS 314
QY 326 DEEVLAQISNLLFAGYETSTVLTWMFHLRSEDKAVQDKLREEICQI--DTDMPTL--DE 381
Db 315 DEDIRAEADTFMFGGHDTTASGLSWLYNLARHPEYQECRCQEVQELLKDRDPKLEWDD 374
QY 382 LNALPYLEAFVYESLRDPPSPYANRECLKDEDFIPLAEPVIGRDCGSVINEVRIITKGMV 441
Db 375 LAQLPFLTMCVKESLRLLHPPAPFISRCCTQD-----IVLPDGRV-----IPKGITC 420
QY 442 MLPLFNINRSKFTYGEDAEERPERWLEDVTDLSNSI-EAPYGHQASFTSGPRACFGWRF 500
Db 421 LIDIIGVHNPTVW-PDPEVYDFRP-----DPENSKGRSPLAP-IPFSAGPRNCIGQAF 473
QY 501 AVAEMKAFLEVTLRVQFEPIISHPEYEHITLIISRPRIVGREKEGYQMRLQ 552
Db 474 AMAENKVVLALMLLHFRFLPDHTEPR-----RKLELIMSAGGLWLRLVE 517
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Job time : 29 secs